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No. 48

## USDC Reports Chemical Production 'Generally Higher'

U.S. Output for  
1st Seven Months  
Has Over-all Rise

WASHINGTON—Production of inorganic and agricultural chemicals for the seven months ending July 31, 1959, was generally higher than production for the same chemicals during the similar period last year, according to the U.S. Department of Commerce in its "Chemical and Rubber Industry Report" for October.

Anhydrous ammonia production amounted to 2,615,941 short tons, or 354,323 short tons more than the seven month period of last year.

Ammoniating solutions (100% N) were also on the increase in the first seven months of 1959, the report says. The 1959 figure was 490,420 short tons, as compared to 372,136 tons last year.

Fertilizer grade ammonium nitrate was up 158,200 tons over the production figure quoted for the first seven months of 1958. The 1959 total came to 1,447,883 tons as compared to 1,289,683 tons last year.

The output of phosphoric acid (100%  $P_2O_5$ ) from both phosphorus and phosphate rock, was 1,083,592 tons the first seven months of 1959.

(Turn to PRODUCTION, page 20)

## Soil Fertility Program Is Praised by South Carolina Plant Food Educational Group

CLEMSON, S.C. — The tenth annual meeting of the South Carolina Plant Food Educational Society was held in Clemson, Nov. 9, with J. Chiles Calhoun, Hartsville, South Carolina, presiding.

One of the highlights of the program was a discussion on "Equipment for Precision Seed and Fertilizer Placement" by Charles W. Gantt, research agricultural engineer of the USDA in Athens, Ga. Dr. Gantt pointed out the importance of placement emphasizing that more attention would have to be paid to this item by farmers in the future because of the increasing use of plant nutrients and the increasing plant nutrient content of fertilizer materials. Dr. Gantt's discussion was illustrated by slides prepared by the American Potash Institute.

The remainder of the program was devoted to a discussion of South Carolina's intensified soil fertility program. Leading off on this topic was H. A. Woodle, extension agronomist, who discussed the accomplishments that the program has brought about and the plans for the future. Mr. Woodle indicated that this program

Delaney Amendment Spectre . . .

## Possibility of Stricter Residue Law Seen as Cranberry Aftermath

By JOHN CIPPERLY  
Croplife Washington Correspondent

WASHINGTON—The recent "cranberry venture" of Arthur S. Fleming, secretary of the U.S. Department of Health, Education and Welfare, leads one to the conclusion that there must be some better methods than the ones he used, to protect the public from alleged dangers in the use of chemical compounds necessary to production of adequate food and fiber for the vastly expanding domestic and world populations.

★ ★ ★

## Overwhelming Fear of Cancer Blocks Logic, Makes Public Afraid of Almost Everything

EDITOR'S NOTE—John Cipperly, Croplife Washington correspondent, has been in close touch with the cranberry episode since the first announcement of alleged residues. Aside from his above report in this issue, Mr. Cipperly presents some private observations and personal comments on the general situation. We thought

The sensational exposé of contamination of a relatively small part of the cranberry crop through the use of a weed killer which, according to reliable medical authorities, has been a component of medical prescriptions for other purposes, has created extremely great pressures on some government agencies.

Consensus of reliable opinion here within the government is that the Food and Drug Administration now

★ ★ ★

Croplife's readers would find them well worth reading.

WASHINGTON—Widespread discussions on the ramifications of the current cranberry fiasco have caused many citizens to take stock of the general health situation in the country and to reappraise public attitudes toward food and other matters with relation to health.

The deadly fear of cancer, manifest in the reaction of much of the public to scare headlines in connection with alleged residues of weed killers in cranberries, is a fascinating thing.

Recently, this reporter sat in a restaurant and overheard a conversation in which several gentlemen reached a unanimous conclusion that any man who smoked two packs of cigarettes a day for ten years will develop lung cancer.

Such are the indiscriminate judgments reached. It occurred to this reporter that since he smokes five packs of cigarettes a day and has smoked cigarettes for more than forty years, perhaps he has an equally good formula—why not smoke more cigarettes and forget cancer of the lung?

This reporter recalls that in his humble childhood home in a medicine cabinet was a bottle of iodine—in the kitchen a bottle of household ammonia—both of which car-

(Turn to LOGIC, page 8)

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finds itself in the Delaney amendment strait jacket. Thus, FDA, under Secretary Flemming's administrative ruling, may only move to condemn farm crops if even an insignificant part of such crops are said to be contaminated through some alleged misuse of a chemical compound designed to expand production of farm crops or to protect them in marketing channels.

The "Delaney strait jacket" results from the amendment to the food additive measure about which an FDA statement of policy dated May 30, 1959, said in effect that except for use authorizations made prior to the enactment of the Delaney amendment, FDA would not approve use of chemical compounds which have been found to be carcinogenic in nature

(Turn to CIPPERLY, page 8)

## Arkansas Meeting Agenda Covers Soil Tests, Fertility

LITTLE ROCK, ARK.—Arkansas' ninth annual Plant Food Conference will be conducted in the Lafayette Hotel in Little Rock, Dec. 10-11. The event is sponsored by the Arkansas Agricultural Experiment Station, the Arkansas Plant Food Educational Society and the Agricultural Extension Service.

The conference is conducted each year for the purpose of helping persons engaged in the distribution of fertilizers and lime to keep up on knowledge gained by the latest agricultural research and experiments pertaining to fertilizer and lime.

The program this year will include discussions about field research in the use of fertilization for cotton, rice, soybeans and pastures. Other fertilizer demonstrations in Arkansas in 1959 will also be reviewed.

The importance of lime and soil tests will also be in the conference spotlight. Dr. W. D. "Bill" Bishop, in charge of soil testing in Tennessee, will be the principal guest speaker at the banquet on the night of Dec. 10. Personnel of the Arkansas Agricultural Station and Arkansas Extension Service will appear on the two-day program to discuss various phases of research carried out through actual tests, both at experiment stations and in association with individual farmers.

Many persons associated with the lime and fertilizer industries in Arkansas are expected to attend the program.

The value of this program to the farmers in other segments of the (Turn to FERTILITY, page 7)



**NORTHEAST WEED GROUP**—Responsible for planning and executing 14th annual Northeastern Weed Control Conference Jan. 6-8, are the group's officials and committee chairmen. Seated, left to right: Dr. L. G. Utter, Diamond Alkali Co., president; Dr. D. A. Schallock, Rutgers University, secretary-treasurer; Dr. E. M. Rahn, University of Delaware, vice president; C. T. Noll, Pennsylvania State University, coordinating committee chairman. Standing, left to right: Dr. W. E. Chappell, Virginia Polytechnic Institute, program chairman; Dr. M. G. Wiltse, the Dow Chemical Co., chairman, public relations committee; A. B. Lindquist, Stauffer Chemical Co., sustaining membership chairman; Dr. S. N. Fertig, Cornell University, awards committee chairman.

## Unveiling of New Herbicides Set for New York Convention

NEW YORK—The herbicide manufacturing industry has been invited to present new weed killing products at the 14th annual Northeastern Weed Control Conference scheduled to be held at the New Yorker Hotel, New York, Jan. 6-8. This "unveiling" session is scheduled for 8 p.m. on the opening day of the meeting.

(Companies wishing to present new products at the Northeastern Weed Control Conference should contact Dr. Charles L. Hovey, Eastern States Farmers Exchange, West Springfield, Mass.)

Other advance information about the first day's Conference activities released by the public relations committee—headed by Dr. M. G. Wiltse, the Dow Chemical Co.—lists a discussion of "Developments with Granular Herbicides and Equipment for Their Application" by Dr. L. L. Danielson, U.S. Department of Agriculture. "Promising New Chemicals for Weed Control" will be discussed by Dr. M. W. Meadows of the Grange League Federation, Inc., Ithaca, New York.

Methods for improving public acceptance of the use of herbicides will be outlined by Dr. Roger Latham, outdoor writer for the Pittsburgh Press, Pittsburgh, Pa., and formerly

director of research for the Pennsylvania Game Commission.

Subject matter chairmen for the 1960 conference are: Horticulture—Oscar E. Schubert, West Virginia University, Morgantown; agronomic crops—Robert C. Wakefield, University of Rhode Island, Kingston; industrial problems—Clarence E. Staples, Central Maine Power Co., Augusta, Me.; aquatics—Roy R. Younger, Halco Chemical Co., Freehold, N.J.; public health—Maurice S. Bowen, 975 Belle Ave., Teaneck, N.J.; highway problems—E. E. Turner, Virginia department of highways, Richmond; and conservation and forestry, W. E. McQuilkin, N. E. Forest Experiment Station, Upper Darby, Pa.

### Dow Appoints New Division Manager

MIDLAND, MICH. — Macauley Whiting, 34, has been appointed general manager of Dow's Midland division, it was announced by Dr. Leland I. Doan, president of The Dow Chemical Co.



Macauley Whiting

Mr. Whiting succeeds the late Dr. William H. Schutte, vice president of Dow and general manager of its Midland division, who died unexpectedly Sunday, Nov. 8. Mr. Whiting has been manager of service departments for the Midland division since 1956, and as such has been responsible for engineering and construction, maintenance and plant services, utilities, purchasing, standards, traffic, and miscellaneous services.

### MONSANTO SALES

ST. LOUIS, MO.—Monsanto Chemical Co.'s consolidated sales for the first nine months of 1959 amounted to \$613,188,000 compared to \$519,705,000 for the same period last year. Included in Monsanto consolidated sales are those of the parent company, its domestic and foreign subsidiaries and that portion of the sales of associated companies represented by Monsanto's 50% ownership. Net earnings from such consolidated sales were \$48,377,000, an increase of 72% over earnings of \$28,148,000 for the first nine months of 1958.

### Frontier Chemical Shifts Marketing Personnel

WICHITA, KANSAS — Melvin E. Clark, vice president-marketing for Frontier Chemical Co., a division of Vulcan Materials Co., has recently announced a number of promotions in his department.

Jerry C. Walker has assumed the newly created position of sales manager-chemicals. Formerly field sales manager, based at Midland, Texas, Mr. Walker has moved to Wichita.

The new assistant sales manager-chemicals is John B. Childress, whose primary assignment will be the direction of Frontier's sales activities through its field representatives.

Richard H. Barton, appointed product manager-chemicals, is responsible for price quoting, order handling, liaison with manufacturing facilities and generally rendering headquarters service to customers.

The job of sales manager-grain fumigants went to Howard A. Stedman, whose duties include field sales, order handling, customer service and liaison with the grain fumigants manufacturing facilities.

E. A. Guldaman, newly appointed traffic coordinator, has moved up from the position of assistant to the traffic manager. R. W. Remmert, former manager of traffic and sales service, has been transferred from Wichita to Birmingham, Ala.

Operating as a division of Vulcan Materials Co., Frontier maintains production facilities at Wichita, Kansas, and Denver City, Texas; and terminals at Grants, N.M.; Dumas, Texas, and Shreveport, La.

### St. Regis Announces Clupak Paper Production

NEW YORK—Production of "Clupak" paper by St. Regis Paper Co. has begun at the company's Pensacola, Fla., mill, it is announced by G. E. Amerman, president of Clupak, Inc., the company which owns the "Clupak" trademark and the patents covering the manufacture of "Clupak" paper.

The new paper will be made on the St. Regis' 212-in. wide machine, which has a production capacity of approximately 180 tons a day. The product will be marketed under St. Regis' own trademark in conjunction with the "Clupak" trademark for use in multiwall sacks and converting kraft grades.

### Illinois Fertilizer Clinics Attract 460

URBANA, ILL.—Eight seed and fertilizer clinics attracted 460 Illinois dealers and sales representatives during October and early November. The meetings were sponsored jointly by the Illinois Agricultural Extension Service, the Illinois Seed Dealers Assn., the National Plant Food Institute, and the Illinois Fertilizer Industry Assn.

At each clinic, the University of Illinois extension specialists presented the program. S. R. Aldrich, soils specialist, H. B. Petty, entomologist, and W. O. Scott, crops specialist, reported the latest information on field crops, soil insecticides and fertilizers.

Mr. Aldrich declared many Illinois farmers don't get the yields they could from corn even though they fertilize heavily and follow good supporting practices. The reason is that farmers fail to secure high enough plant populations. He suggested about 16,000 plants an acre for high moisture supplying soils and about 12,000 for low moisture supplying soils. Some fields end up with only 9,000 to 10,000 plants an acre, he asserted.

Mr. Petty reported that soil insecticide treatments before corn planting are becoming more popular. Broadcast applications have proven more effective this past year than concentrated band applications in the row, particularly in controlling cutworm and grape colaspis. He also mentioned that new systemics may be on the market next season for Hessian fly control. These materials have looked effective in stopping the wheat pest and may allow farmers wanting to seed wheat early to do so without causing a Hessian fly build-up in the community, he said.

### Richmond Guano Elects James H. Pate Secretary

RICHMOND, VA.—James H. Pate has been elected secretary of the Richmond Guano Co. here, announced L. D. George, vice president.

A native of Clio, S.C., Mr. Pate graduated from North Carolina State College with a major in agronomy and has been active since then in the fertilizer industry.

He has been associated with the Richmond Guano Co. since February, 1958. In his new position, Mr. Pate will be in charge of sales.

## International Minerals Completes Series Of Ten Sales Training Clinics Across U.S.

SKOKIE, ILL.—International Minerals & Chemical Corp. recently completed a series of ten sales training clinics for salesmen of fertilizer manufacturing companies. The series, beginning on Oct. 12 and ending Nov. 13, featured completely new material on how to increase fertilizer sales. Total attendance was around 500, the company reports, an increase over the number at last year's similar series.

The program at each of the ten cities included new slides, movies in sound and color, live skits depicting sales situations and other features including audience participation events.

Topics were divided basically into two sections. The first was the "planned sale," emphasizing what must be known to find sales, and "what you have to do" to prepare for them. The second is the planned action, or "using what you know."

"Surveys in selling have left no doubt about the needless loss of sales because of the lack of good prospecting and poor planning," said Anthony E. Cascino, IMC vice president of marketing.

"These meetings were developed to overcome those and other obstacles to sales, and they have been fitted

specifically to the day-to-day problems encountered by the fertilizer salesman," he said.

General topics covered include: sources of sales; buying motives; credit and the salesman; the plus from soil tests; planning strategy; stretching selling time; low price vs. high quality; closing sales; keeping the customer sold; the key to the customer's mind; making the job easier with sales tools; and fertilizer—an investment, not a cost.

Neal Schenel, IMC's manager of merchandising who developed the courses, again conducted the meetings, assisted by IMC personnel.

The clinics were initiated last winter as part of IMC's "full orbit" customer service program. Fertilizer manufacturers across the country had expressed the need for help in boosting the sales power of their staffs. Many of the topics were suggested by these manufacturers, and new topics covered this year were the result of requests from participants in the first meetings.

IMC held meetings at the following cities during the month-long series: Kansas City, Mo.; Shreveport, La.; Atlanta, Ga.; Tampa, Fla.; Raleigh, N.C.; Baltimore, Md.; New York, N.Y.; Columbus, Ohio; Indianapolis, Ind., and Minneapolis, Minn.

### NO MOTHS ALLOWED

TRENTON, N.J. — New Jersey Christmas tree brokers and dealers are reminded that they must obtain certification of freedom from gypsy moth for all Christmas trees and greens brought into the state from gypsy moth quarantined areas.

William M. Boyd, chief, bureau of entomology, New Jersey Department of Agriculture, issued the warning and also cautioned motorists not to bring uncertified evergreens from the quarantined areas into New Jersey.

The gypsy moth quarantined area is comprised of Connecticut, Rhode Island, Massachusetts, all of New Hampshire and Vermont except a narrow strip along their northern borders, the southern half of Maine, and sections of eastern and southern New York State. Certification of evergreens can be granted with a minimum of delay at cutting sites and loading points in the quarantined area, Mr. Boyd said.



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*Southern Sales Office . . . Candler Building, Atlanta, Ga.*

# "Magnesium deficiency is becoming that's why I'm sold on your



Mr. George Lippincott, president, Dorchester Fertilizer Co. (left) and Basil Sargent, district sales manager, IMC, talk over the fertilizer situation.

## Talk to your IMC representative about this year's SPM program. Find out how it can help your fertilizer sales

Several years ago, IMC launched a powerful sales program with this two-fold purpose: to *inform* growers, fertilizer manufacturers and influence people of the growing need for magnesium . . . and second, to *establish Sul-Po-Mag as the way* to add magnesium to the soil.

This program has been an outstanding success, and it is still gaining momentum. Magnesium is now recognized in many sections of the country as the fourth major plant food element. Fertilizer manufacturers throughout the land now include Sul-Po-Mag for magnesium in their complete mixed fertilizers.

The manufacturers who fortify their fertilizers with Sul-Po-Mag are supported by full-scale national and local advertising. Magazine ads, direct mail, radio commercials and publicity tell the SPM story to growers of tobacco, citrus, potatoes, fruits, vegetables and other crops. IMC supplies such local promotional materials as newspaper ad mats, tags, seal imprints, imprinted direct mail pieces and posters at no cost.

Let the SPM program sell extra fertilizer for you. Your IMC representative can show you how to use it to full advantage. Contact him soon, or write c/o the address at right.

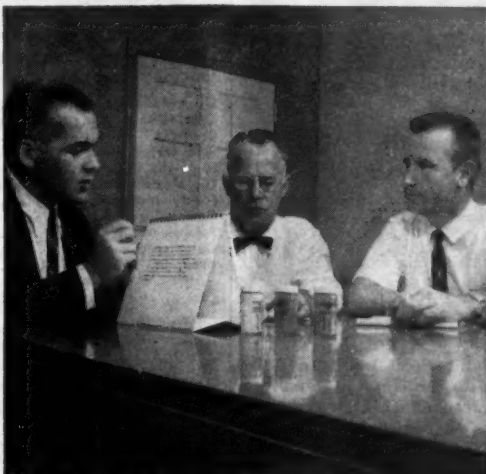


# a real problem around here . . .

## Sul-Po-Mag program."

Sul-Po-Mag fills a fast-growing need on farms throughout the country. It's today's best source of magnesium. It's economical and easy to handle. Here's the story of the product and the promotional push behind it.

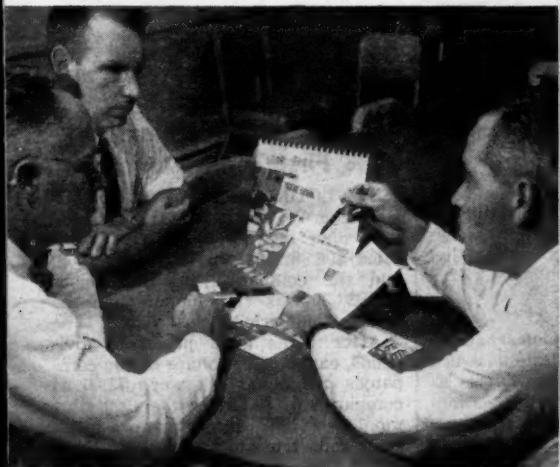
Here IMC district sales manager, Basil Surgent, discusses the Sul-Po-Mag program with Mr. George P. Lippincott, president, and Mr. John S. Neild, Jr., sales manager of the Dorchester Fertilizer Company, Cambridge, Md. Mr. Enos Valliant, chairman of the board, was not available when pictures were taken.



"Before showing you the 1960 SPM program, I'd like to point out that growers are really starting to recognize the need for magnesium. And Sul-Po-Mag in mixed fertilizers is now accepted as the way to protect against magnesium deficiencies."



"That's sure true here in our area, Basil. A good many of our customers buy only fertilizer containing Sul-Po-Mag. I think our SPM advertising . . . such as this merchandising package . . . had much to do with increasing awareness."



"That's my point. This SPM program is getting the job done because every piece is packed with vital, up-to-date information. See how the pieces of this package pin-point magnesium needs by crops. Each leaflet can be imprinted with your name and address."



"This SPM poster can carry your company name . . . by imprinting your name and address on the material in the SPM program, it ties in with your total advertising effort. It helps establish your brand of fertilizer as the way to add magnesium to the soil."



"In answering requests, we send out this magnesium booklet. It tells the magnesium in agriculture story in detail . . . shows how Sul-Po-Mag in mixed fertilizers can help a variety of crops in all parts of the country."



"This Sulphate Bulletin keeps growers, vo-ag teachers, county agents, and extension people up-to-date in the need for sulphur, magnesium and potash. It's sent out quarterly from our home office. Manufacturers also receive the bulletin."



"Here's one of our most popular fertilizer grades. By making this fertilizer available with Sul-Po-Mag, we are helping our customers overcome magnesium deficiencies. It's just one of the "extras" that make our fertilizer a favorite with growers in these parts."



"You can count us in for 1960, Basil. The SPM program will move fertilizer for us. We know that by making Sul-Po-Mag available in Dorco mixed fertilizers, and letting folks know about it, we will profit from the growing demand for magnesium in our area."

AGRICULTURAL CHEMICALS DIVISION

**INTERNATIONAL MINERALS & CHEMICAL CORPORATION**

Administrative Center: Skokie, Illinois



50  
IMC

1909

Products for growth  
1959

THE FARMER'S BEST BUY

**YOUR FERTILIZER DOLLAR GOES FURTHER!**

Fertilizer prices, in terms of plant food content, are only slightly higher than they were in 1939. Prices of all items farmers buy have advanced 146% in the same period.

Source: U.S. Dept. of Agriculture Statistics Printed in U.S.A.

IT PAYS TO USE FERTILIZER

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THE FARMER'S BEST BUY

**THESE ARE THE FACTS!**

In 1939, the plant food content of an average ton of fertilizer was 20.3%. Today it averages 30.2%. This increase in plant food content has practically offset the 51% increase in the average price per ton of fertilizer.

Thus, on the basis of what actually is in the bag, the cost of fertilizer today is less than 2% more than it was in 1939.

**FERTILIZER IS A BETTER BARGAIN THAN EVER!**

NATIONAL PLANT FOOD INSTITUTE

IT PAYS TO USE FERTILIZER

**HOLLER FOR YOUR DOLLAR**—The National Plant Food Institute, 1700 K St., N.W., Washington 6, D.C., has made available to the trade a "fertilizer dollar bill" on which is printed the latest figures based on U.S. Department of Agriculture statistics concerning the economics of fertilizer use. It is available in two forms: On sturdy tag stock suitable for stitching in the closure of the fertilizer bag, or on soft paper with gummed edge, appropriate for use as an envelope stuffer or in attaching to statements of account. The "dollars" are sold at cost, NPFI says. \$2.50 a thousand for the gummed type; \$4.50 a thousand for the tag stock bill.

## Insecticide Added To Cattle Feed

TORONTO, CANADA — Canada Packers, Ltd., has announced that it is now manufacturing and marketing a cattle feed containing a new systemic insecticide for control of the warble grub.

Under the plan, the feeder replaces the regular feed with a new supplement, called "Shur-Gain Warberid Cattle Supplement 'A,'" according to the manufacturer's instructions.

"This is the first time," said D. T. Ross of Canada Packers, "that livestock feeders have been able to attack warbles in this easy way, simply through normal feeding."

The insecticide in the feed is Ronnel (Dow Chemical Co.), which has been marketed in bolus form, in the past under the name Trolene. The insecticide destroys the warble grub in the system of the host animal's body before it has migrated through it.

Mr. Ross said that tests with the insecticide have been conducted at the Shur-Gain farm for the past two years and that the company has obtained government registration to make the feed product available.

"The additional investment required to treat an animal averages about 50¢, depending on the size of the animal," the company said. "The returns for this investment include destruction of the warble grubs, faster, more economical gains with beef cattle or dairy heifers, less damage to beef hides and less loss in carcass trimming."

"Beef cattle, dry cows, growing heifers and bulls can be treated in the new way. However, because of the possibility of residues in the milk, dairy cattle should not be so treated while producing milk for human consumption. The feeding period also is limited because the insecticide can only be used effectively when the grub is in a certain stage within the animal's body. This occurs only during the period of Sept. 15-Dec. 15."

## ELECTED VICE PRESIDENT

EL PASO, TEXAS—E. H. Miller of U.S. Borax & Chemical Corp., Carlsbad, N.M., has been elected first vice president of the New Mexico Mining Assn. during its annual convention held here in connection with International Mining Days.

## Selective Herbicides on Program for Discussion at Southern Conference

MEMPHIS—Use of selective herbicides for weed control in specific crops will be explored during the 13th annual Southern Weed Conference in Biloxi, Miss., Jan. 20-22, 1960.

According to V. S. Searcy of the Alabama Polytechnic Institute, Auburn, Ala., conference president, the following general topics will be grouped into sectional programs during the three-day meeting: fundamental aspects of weed control; control of specific weeds; control in specific crops; weed control in pasture and turf; brush and weed control in non-crop areas; horticultural weed control; aquatic weed control; extension aspects of weed control; public health aspects of weed control; and new developments.

Dr. Don Davis, also of API, is chairman of the program committee. An outstanding program on all phases of research and education programs in chemical weed control is being prepared, he reports.

Conferees were urged by Mr. Searcy to make their own hotel reservations early. All sessions of the conference will be held at the Buena Vista Hotel in Biloxi.

## California Weed Group To Meet January 19-21

SACRAMENTO—The twelfth annual California Weed Conference will be held in Sacramento Jan. 19-21, with 1,000 delegates expected to attend.

Conference sessions will be held at Sacramento Memorial Auditorium. C. Bruce Wade, Redding, Cal., president of the California Weed Conference, and Walter S. Ball, Sacramento, committee chairman, are in charge of arrangements.

Mr. Wade is agricultural commissioner of Shasta County and Mr. Ball is the chief of the Bureau of Rodent and Weed Control and Seed Inspection, California Department of Agriculture.

Those who will attend include farmers, farm advisors, county agricultural commissioners, state and federal employees, mosquito abatement officials, commercial pest control operators and chemical company representatives.

# PATENTS and TRADEMARKS

2,912,316

**Combined Bug Repellent and Fertilizer.** Patent issued Nov. 10, 1959, to Temp Skinner, Phoenix, Ariz. A composition of matter for repelling plant feeding insects consisting essentially of:

Stock molasses, gallons	4
Lime sulphur fluid mixture, gallons	3 1/2
Creosote, gallons	1/4
Pine tar, gallons	1/4
Fuel oil, gallons	1/4
Oil of pennyroyal, fluid ounce	1/4
Diethyl sodium sulfosuccinate, fluid ounce	1/4
Calcium trisilicate superphosphate, lb.	205
Potassium sulphate, lb.	100
Cottonseed meal, lb.	50
Urea, lb.	100

2,913,323

**Herbicidal Method and Composition Employing Bis (2-Methyl-5-Ethylpyridine) Copper (II) Chloride.** Patent issued Nov. 17, 1959, to Margaret D. Cameron, Beaumont, Texas, assignor to Monsanto Chemical Co., St. Louis, Mo. A herbicidal composition comprising an oil-in-water emulsion containing a herbicidal concentration of bis(2-methyl-5-ethylpyridine) copper (II) chloride.

2,913,324

**Sulfoethyl Carboxylic Acid Ester Plant Growth Regulants.** Patent issued Nov. 17, 1959, to Milton Kosmin, Dayton, Ohio, assignor to Monsanto Chemical Co., St. Louis, Mo. A method of improving the quality of tobacco leaves and the number of bolls on cotton plants comprising applying to said plants an amount sufficient to inhibit the growth of the flowering tip of said plants of an aqueous solution of a compound selected from the class consisting of 2-(sodium sulfo)ethyl 1-naphthaleneacetate and 2-(sodium sulfo)ethyl (2-naphthoxy)acetate.

2,913,325

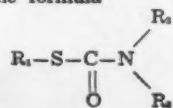
**Amyl-N,N-Diethylthiocarbamate and Use as Herbicide.** Patent issued Nov. 17, 1959, to Harry Tilles, El Cerrito, Cal., and August B. Lindquist, Maitland, Fla., assignors to Stauffer Chemical Co. The method of combatting weeds comprising applying a phytotoxic concentration to the soil of n-amyl-N,N-diethylthiocarbamate.

2,913,326

**Propyl-N,N-Diethylthiocarbamate and Use as Herbicide.** Patent issued Nov. 17, 1959, to Harry Tilles, El Cerrito, Cal., and August B. Lindquist, Maitland, Fla., assignors to Stauffer Chemical Co. The method of combatting weeds comprising applying to the soil a phytotoxic amount of n-propyl-N,N-diethylthiocarbamate.

2,913,327

**Certain Thiocarbamates and Use as Herbicides.** Patent issued Nov. 17, 1959, to Harry Tilles, El Cerrito, and Joe Antognini, Mountain View, Cal., assignors to Stauffer Chemical Co. The method of combatting weeds comprising applying to the soil a phytotoxic amount of a compound having the formula



wherein  $R_1$  is a lower alkyl radical and  $R_2$  and  $R_3$  are identical lower alkyl radicals having at least three carbon atoms.

2,913,328

**Isobutyl-N,N-Diethylthiocarbamate and Use as Herbicide.** Patent issued Nov. 17, 1959, to Harry Tilles, El Cerrito, and Joe Antognini, Mountain View, Cal., assignors to Stauffer Chemical Co. The method of

combatting weeds comprising applying to the soil a phytotoxic amount of isobutyl N,N-diethylthiocarbamate.

## Industry Trade Marks

The following trade marks were published in the Official Gazette of the U.S. Patent Office in compliance with section 12 (a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. (See Rules 20.1 to 20.5.) As provided by Section 31 of the act, a fee of \$25 must accompany each notice of opposition.

**One Shot**, in capital letters, for fertilizer. Filed April 10, 1958, by Vaughn's Seed Co., Chicago, Ill. First use March 24, 1958.

**UraGreen**, in capital letters, for nitrogen solutions used as fertilizer. Filed Aug. 18, 1958, by Spencer Chemical Co., Kansas City, Mo.

**Pyrolan**, in capital letters, for ingredients used in the manufacture of insecticides. Filed Sept. 4, 1957, by Geigy Chemical Corp., Ardsley, N.Y. First use Aug. 27, 1954.

**Sputnik**, in capital letters, for insecticides and larvicides. Filed Dec. 10, 1958, by Delmar Engineers, Bell, Cal. First use Jan. 21, 1958.

**Borgo**, in capital letters, for pesticides useful in killing and controlling borers and their larvae. Filed April 2, 1959, by Thomas Enterprises, Inc., Tulsa, Okla. First use Feb. 14, 1959.

## Bemis Reports Earnings Up 17% First Three Quarters

ST. LOUIS—Sales of the Bemis Bro. Bag Co. and subsidiaries for the first nine months of this year totaled \$98,382,894, up 11% over 1958, and the company's net income of \$2,183,639 was 17% higher than the comparable period of last year.

After taxes and preferred dividends, earnings per share of the company's common stock were \$3.06 as compared to \$2.63 for the first nine months of 1958, according to a quarterly report to stockholders by F. G. Bemis, president.

"Increased sales quite frequently result in an even greater percentage increase in profits because some costs—like depreciation—do not go up with higher sales volume. This factor is present, of course, in company earnings to date. However, of greater importance is the over-all cost reduction that has been brought about by improved manufacturing methods. The improvement program is continuing. We expect increased savings from this source in the future," he said.

## New Line Started by Chemical Fertilizer Co.

MODESTO, CAL.—A new line of dry mixed fertilizer is now being processed by the Chemical Fertilizer Co., Inc. of Modesto. For 10 years the firm has produced only liquid fertilizers.

Completion of a new plant late last year permitted the company to go into production with the new line this summer. The line includes three principal products: ammonium phosphate 16-20-0, triple superphosphate, and 20% pelleted single superphosphate. All products are pelleted.

The chemicals are sold under the company's "Producer's Brand" label, and marketed all over California and in parts of Nevada and Oregon.

Harry Pierce, president of Chemical Fertilizers, also reports that the firm has begun to distribute, but not to manufacture, various pesticide products. Don Hicks is general manager of the processing operations.



## FERTILITY

(Continued from page 1)

economy in South Carolina was discussed by Luther P. Anderson, assistant extension agronomist.

Using slides prepared by the National Plant Food Institute based on data supplied by Clemson College, Mr. Anderson indicated that following lime and fertilizer recommendations on the basis of soil tests could increase the income of South Carolina farmers by over \$400,000,000. He then broke down these figures on a crop basis and urged that industry and other segments of the economy support these county programs to the best of their ability. He also pointed out that if current recommendations were followed, the tonnage of fertilizer moved in South Carolina would more than double.

"How the Program Worked in Edgefield County" was next discussed by O. W. Lloyd, county agent. Mr. Lloyd indicated what the program had meant to him in means of increased farmer support and farmer contact. He stated that this had been the best single tool which he, as a county agent, has had at his disposal since he had been in extension work. He also stated that the taking of the samples and sending out results and recommendations did not constitute the end of the program. It is his intention to continue this program through an action program each year devoted to some specific segment of the county agriculture.

Mr. Lloyd also pointed out that fertilizer sales in Edgefield County were, on the average, 15% above that of sales in adjoining counties and he attributes this largely to the effect of the soil fertility program.

Alex Bauknight, county agent in Lexington County, and J. N. Davis of Leesville, S.C., pointed out what was taking place in Lexington County, the latest of the counties to undertake the soil fertility program. They outlined the plan in which they hope to carry the program out and stated some of the objectives and goals for Lexington County.

Unique about the Lexington County program is that Mr. Bauknight and Mr. Davis have secured the co-operation of the vocational agriculture teachers, the Soil Conservation, and the ASC office, and other county agriculture workers in carrying this program out. The county has been broken down into areas and a vocational agriculture teacher has accepted the responsibility for collecting samples in each of these areas. Mr. Bauknight was enthusiastic about prospects this program holds out.

"How a Fertilizer Manufacturer Sees the Soil Fertility Program" was next discussed by D. H. Banks of St. Matthews, S.C. In urging full support of this program by all of the fertilizer industry in South Carolina, Mr. Banks pointed out that the fertilizer industry has a product to offer of which they can be justly proud. He stated that a successful business meant not only dispensing of the product offered for sale, but dispensing of it in such a way that the customer receives maximum benefit from his expenditure for the product. Sound business, Mr. Banks stated, depends upon good dealer-customer relationship.

Tribute was paid to Clemson College for encouraging the intelligent and increased use of fertilizers by the farmer. Mr. Banks urged the industry members present to do their best to support such a program because of the obvious benefits.

Rounding off the morning program was a discussion on "Intensified Soil Fertility Programs—A Valuable Educational and Sales Tool" by Dr. M. S. Williams, chief economist of the National Plant Food Institute. In

pointing out what these programs could mean to the areas in which they were effected, Dr. Williams pointed out the importance of giving the county agent every possible support. This includes preparation and distribution of news materials, radio script materials and visual aids, and making them available to the agent himself. If the program is to be truly successful at the county level, not only must it have industry support, but it must have the administrative backing of the extension service, he said.

Where these soil fertility programs have been most successful, they have included the support of bankers, news media, merchants, civic organizations, and certainly the fertilizer industry. The specific ways in which the industry could

help included supplying the materials called for on the basis of a soil test, supplying soil sampling materials, taking samples for the farmer, and other similar aids.

"Farmers will use more fertilizer more wisely for one reason—they want a better way of life. This better way of life for the farmers means a better community in which to live and these benefits accrue to all segments of the community. This important point should be kept in mind in getting these programs across at the local level. In getting them across to the local level, the interests of the fertilizer industry will be served," Dr. Williams said. He added that the total market was "somewhat like a pie." Each individual company could get a bigger piece in one of two ways. It could either get a bigger slice of the existing pie or it could get the same slice of a bigger pie. The function of the NPFI and of the South Carolina Plant Food Educational Society is to increase the size of the

pie and then it is up to each individual company to do what it can with this increased market.

The afternoon was spent in a tour of the Poole agricultural center, the soil testing laboratory, the fertilizer department, the green houses, and the processing laboratory. That evening the social hour was given by the nitrogen producers after which the annual banquet took place. The featured speaker of the evening was Burnet R. Maybank, Lieutenant Governor, who discussed the importance of a sound agriculture to the entire economy of South Carolina.

## NEW DISTRIBUTOR

CEDAR RAPIDS, IOWA—Griffin Implement & Milling Co., Inc., Monroe, North Carolina, is a new distributor for Highway Equipment Co., Cedar Rapids, the latter has announced. The new distributor will handle "New Leader" lime spreaders, combination lime and fertilizer spreaders, "Wide Spread" lime and fertilizer spreaders and mobile blenders.

# Borate your Fertilizers

## FOR CUSTOMERS IN THE AREAS SHOWN



for Insurance  
SUPPLY REQUIRED  
BORON...

for Economy  
CHOOSE FERTILIZER BORATE...  
THE MOST ECONOMICAL  
SOURCE OF BORON...

For quality, yield and stands of...

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### TRUCK AND VEGETABLES

Beets, broccoli, celery, cauliflower, etc.

For...

1. Complete Fertilizers
2. Granulated Fertilizers
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PORTLAND, OREGON  
7134 S. W. 52nd Avenue  
W. LAFAYETTE, INDIANA

United States Borax & Chemical Corporation



## CIPPERLY

(Continued from page 1)

after test feeding of animals at a high level of ingestion. This policy statement not only prohibits the use of such additives in food and animal feeds without any established residual tolerance level by FDA, but it appears to entirely ban any such use whatever.

The Delaney amendment—"the FDA strait jacket"—was enacted to apply only to food additives. Thus far it is not ascertained that it had a retroactive effect on the Miller amendment which was designed to cover use of pesticidal chemicals in the production and protection of foods. The Miller amendment placed on the chemical industry the responsibility of presenting to FDA scientific data showing that such economic poisons could be safely used if a residual tolerance level were prescribed, or that no residue whatever would appear if the chemical compound were used only at a specified time prior to time of harvest of the crop.

Under the provisions of the FDA as amended by the Miller amendment, USDA is required to certify approval of a chemical compound as essential to the production of a crop.

After that certification is made it is then up to Food and Drug Administration to examine industry data and establish some tolerance level or no tolerance level whatever at the time the farm commodity or any end product thereof reaches the consumer. FDA is required to certify complete harmlessness to the consumer.

In the instance of the cranberry fiasco it is now known that a very small number of cranberry growers had through some undetermined reason misused the weed killer. This has resulted in a broad scale attack on the cranberry industry and indirectly on the entire agricultural chemical industry.

In view of the fact that USDA in its activities in meat, poultry and canned goods inspection (and in the latter instance it has used FDA standards of wholesomeness or harmlessness) has been able to police the U.S. food supply with great success and for the protection of public health, without scare headlines, it seems reasonable to ask why it has not been possible for Secretary Flemming to remove an insignificant part of the national cranberry crop from the market without assembling press conferences to startle the housewives of the nation with a new "cancer threat."

The depth of the Flemming attack on the cranberry industry is difficult to probe. The HEW secretary hides his light under the pious devotion to the protection of public health, which is part of his oath of office. Certainly one cannot challenge his attitude nor his sincerity.

But it is noted in other quarters that FDA has a big field of inspectors who through wide experience know full well the danger points and learn to suspect certain areas where farmers may be prompted to misuse chemical compounds. The FDA inspectorial service is like a local police force which knows full well where to look for dope peddlers and other habitual violators of the laws.

Certainly on the basis of such experience, might it not have been incumbent on the part of Secretary Flemming to seek some dangers in the use or possible misuse of this weed killer in the production of cranberries since he has publicly admitted that such misuse occurred in the production of the 1957 crop?

Another aspect of the FDA charges against the cranberry industry may be found in the use recommendation by USDA as economic necessity for

the growers. USDA notifies FDA of residual qualifications, and it is understood that as residual tolerances are approved or none whatever are allowed, FDA takes a most conservative approach and sets any residual tolerance at a point where even the most exaggerated misuse would still be harmless to the consumer.

In the instance of aminotriazole, FDA refused to permit any tolerance level for the cranberry crop—an act within its authority and one which the cranberry industry does not contest. There are some cranberry growers who have abused the use of this economic product in production.

However, there are many meat packers and poultry processors and packers of fresh produce who also may have been guilty for many reasons of processing such farm commodities, but under the inspection service of USDA the entire industry has not been overwhelmingly charged from a Washington, D.C., publicity spring board of a threat to the health and welfare of the consuming housewives of the nation.

Latent in the Flemming venture into the cranberry field is the underlying threat of attack on the entire concept of the USDA economic approval for use and certification of a chemical compound for production purposes subject to subsequent residual or no-tolerance levels for such economic materials.

This might lead to a congressional demand that use certification for chemical compounds long seen necessary to the farmer for production of his crop should be taken away from USDA and the entire control be sent to FDA.

Consensus of opinion here has been that Congress has thus far been unwilling to give this broad grant of authority to FDA and purposely gave USDA the power to recommend or certify the usefulness of any chemical compound subject of course to FDA determination of some safe use formula.

Now, however, in this instance Secretary Flemming has decided that he will apply the Delaney amendment to the Miller Amendment and impose a total "Delaney strait jacket" on FDA so that no residual tolerance may be permitted, even though it may be clear that a small residual tolerance as now found in the allegedly "contaminated" cranberries is so small that one might spend all of his lifetime eating cranberries without developing cancer.

"Misuse" can be a battle-cry of the Delaney advocates in Congress at the next session who may stand up to be counted as opposed to "cancer." Certainly no one can be found to advocate cancer.

But the misuse of chemical compounds—economic boons in the production and protection of farm products—ultimately can be the basis of attack which Secretary Flemming may contemplate. He has asserted that he has ordered FDA not to oppose application of the Delaney amendment in the pending color additive amendment to the FDA Act which will come up at the renewed session of the 86th Congress.

Misuse of a dangerous product—particularly when it carries a cancer connotation, will find few if any Congressmen who will stand up to oppose a possible tightening of the FDA Act to prevent misuse. Such a decision might be so restrictive that misuse as possibly defined by Congress might forbid any use whatever.

What with this league and that league now formed to reform current problems and vices it is difficult to study three score years of objective adjust to local conditions.

Misuse is an all-inclusive word. It

fits into the lexicon of the food fad-dists—the "protectors of the race"—it meets the requirements of the organic chemical fertilizer exponents.

FDA continues to feed out reports of contamination of cranberries under its standards. But it must be known that the FDA condemnation is but a very small part of the crop now prepared for the market place of the quantity that has been inspected. It has been told to Croplife by substantial government officials that legal contamination is very low.

But this cranberry fiasco may be little more than a forerunner of what may be expected from the Flemming side of HEW. It must be seen that Mr. Flemming, armed with white and shining armor of anti-cancer, may be heading for an appeal to Congress to put the entire control over production of foods and the use of chemical compounds under HEW.

For the interim, it is wise for the chemical industry to forget Mr. Flemming and concentrate on the probability that HEW will think in terms of total control—of swinging into Congressional hearings asking who is in favor of cancer. And the echo answers—no one.

## LOGIC

(Continued from page 1)

ried a bold label of "poison" on the bottle.

Yet I remember that in the winter when I got my shoes soaking wet and came into the house chilled to the bone and an impending sore throat, that my dad took a stick and daubed a piece of cotton in the iodine bottle and painted my tonsils with an unadulterated solution. Likewise when my mother wanted to wash my scalp fully clean, she dumped a generous solution of household ammonia into a pan of scalding water and warned me to keep my eyes closed as she washed my head clean.

The Flemming-inspired cranberry scare is little more than amusing in the safety wilderness of the present national community. The leagues to protect the safety of the community seem not too deeply alarmed at the use of automobiles with better than 125 miles per hour speed.

Yet they shudder at an allegation that the cranberry crop may cause cancer, although the facts are that on the basis of cranberry consumption reported in official sources at not more than  $\frac{1}{2}$  lb. per capita per annum is so insignificant that even if the entire consumption of the alleged contamination of the cranberry crop was absorbed in this crop year—or this holiday season—it would be meaningless.

## Sulfur Production Rises During September

WASHINGTON — Production of sulfur in the U.S. during September 1959 marked a considerable increase over the output of the same month of 1958, according to figures just issued by the U.S. Department of the Interior, Bureau of Mines. Production totaled 399,157 long tons in September, 1959, as compared to 335,823 in September, 1958. Production in Au-

gust, 1959, was 368,561 tons.

The report says that producers' stocks of native sulfur decreased from the previous month, and at the end of September totaled 3,814,932 tons.

Details of sulfur production, both native and recovered, are seen in the following table contained in the government report:

Production, Mine or Plant Shipments, Apparent Sales and Producers' Stocks of Native and Recovered* Elemental Sulfur in the U.S., in Specified Periods of 1958-59, in Long Tons					
	August 1959	September 1959      1950		January-September 1959      1958	
Native sulfur (Frasch):					
Production .....	368,561	399,157	335,823	3,250,536	3,558,152
Mine or plant shipments ..	446,574	491,026	361,998	3,896,881	3,379,154
Apparent sales† .....	480,290	460,017	349,222	3,877,393	3,328,501
Producers' stocks‡ .....	3,875,792	3,814,932	4,652,199	3,184,932	4,652,199
Recovered sulfur*:					
Production .....	54,169	52,050	51,709	489,735	451,138
Mine or plant shipments ..	58,604	54,573	47,201	522,890	434,448
Apparent sales† .....	57,760	54,181	40,107	512,795	435,767
Producers' stocks‡ .....	156,342	154,211	172,446	154,211	172,446

\*Recovered sulfur of a purity of 97% or greater.

†Calculated from production and change in stocks during the period.

‡Producers' stocks at mines or plants, in transit and warehouse at end of period.



Henry Frazier

**NEW SALESMAN**—Henry Frazier has been appointed district salesman for Alabama, Mississippi and west Tennessee for Reasor-Hill Corp., Jacksonville, Ark. Mr. Frazier resides in Springfield, Tenn.

## Missouri Dealer Clinic, Short Course Announced

COLUMBIA, MO.—The Soil Fertility and Plant Nutrition Council of Missouri, Inc., has announced a Fertilizer Sales Clinic to be held at the Memorial Student Union on the University of Missouri campus here, Dec. 1. Also announced was a Soil Fertility and Plant Nutrition Short Course to be held at the same place on Dec. 2-3.

The fertilizer sales clinic is designed for everyone who sells fertilizer, from manufacturers to dealers, the council says. It will include both agronomic and business services, merchandising and information on how to figure the costs of doing business.

The short course will be in honor of Dr. William A. Albrecht, long time head of the soils department of the University of Missouri.

The council is cooperating with the university in sponsorship of the events.

## NEW BAG PLANT

SAN FRANCISCO — A new bag manufacturing plant is currently under construction in Newark, Calif., by the Bemis Bro. Bag Co. The one-story building, in southern Alameda county, is the fourth new Bemis plant to be built during the past five years. The building will measure more than 150,000 sq. ft. on land area measuring around 17 acres. Waterproof laminated textile bags, multi-wall bags, and burlap, cotton, and open mesh containers will be produced. It is expected to be in operation during the late spring of 1960.



# Fast Growing Texas Farm Chemical Firm Tops \$200,000 Sales Mark in Two Years

By JESS F. BLAIR  
Croplife Special Writer

Perhaps the fastest growing farm chemical company in San Angelo, Texas, is the two-year-old company known as Bes-Tex Insecticides. Roy Sims, the owner, is due to top the \$200,000 sales mark for 1959, and with prospects to increase this another 20% in 1960.

During 1959 Mr. Sims, by working with crop dusters, treated about 40,000 acres of cotton for insects and then spread defoliants on another 16,000 to 18,000 in the autumn.

In addition, he now is selling 27 small-packaged items to retail dealers in about one fourth of the state. These are formulated by a large manufacturer who puts the Bes-Tex label on each package. Mr. Sims also sells several of these items in liquid form, buying the chemicals in bulk and bottling them at the store. Some items sold to retailers are ant killer, rat killers, insecticides for flowers, garden and field and several kinds of plant food.

"I saw an opportunity for a specialized farm chemical store," says Mr. Sims, "and started out selling cotton insecticides. To increase volume, I contacted some crop dusters I had flown with several years ago and worked out a deal for them to fly in this area. That was the start of a nice growth which is still continuing."

Having been a flier four years and a district salesman with another company for five years, Mr. Sims had a wealth of experience to put into his new business.

"Much of it depends upon the farmer's good will," he said. "This last year a careless pilot killed some cotton while spraying for mesquite and it cost me \$200. So we watch those things closely. If the first application does not get a good kill of insects, we will do over whatever is necessary."

Mr. Sims set up office in his shop for the crop dusters. He rents short wave radio equipment from a local firm and uses it on the planes and in the pick-ups. This saves much driving and speeds up the work by at least 25%, he says.

"A farm chemical dealer must have a good educational program to succeed," he explained. "For instance, farmers formerly allowed the small fleahoppers and aphids to get the early fruiting so the stalks would grow larger. Now with mechanical harvesting increasing, farmers must get the crop out earlier. Therefore, we started stressing early season control. It helps the farmers and it gives us a nice bit of business early in the spring. But if we hadn't pointed this out to all our customers, some of them might have delayed early season control for another year or so."

Mr. Sims has cut out expenses wherever possible. He owns two trucks—a small one for local work and a large truck-trailer which hauls 16 tons of chemicals to dealers.

He keeps one salesman on the road most of the time. This man not only pushes the 27 Bes-Tex items, but is

(Turn to FAST GROWING, page 13)



ROY SIMS, owner of Bes-Tex Insecticides, San Angelo, Texas, is shown here at extreme left. With him are crop dusters and field helpers during the busy insect season.

Mr. Sims gets contracts with farmers and allows dusters to use the store as an office. He pays them per acre and charges farmers a regular price for the chemicals.

## Addition of Garden Center Helps Georgia Dealer Boost Fertilizer Sales

A new garden center put in by the J. W. Looper & Swan Co. at Dalton, Ga., was the means of strengthening a dwindling fertilizer business. Through the many new customers coming to the garden center, a large amount of small-packaged fertilizer is being sold.

The owners, J. W. Looper, and his son-in-law, Paul Swan, once had a thriving business in cotton buying, selling bagging and ties, and with the fertilizer plant. They could sell fertilizer to increase cotton yields, then buy the cotton in the autumn.

Finally, however, came the exodus of small farmers to industrial jobs and later the Soil Bank, both of which almost eliminated cotton in the area. Nearly all crop land went into grass and forage crops.

Though farmers are now fertilizing pastures and other crops besides cotton, the fertilizer sales were still below normal. Then came the garden center and the unexpected increase in sales.

"We sell fertilizer in several sizes, from 5 lb. up to 100 lb.," said Mrs. Swan, who helps manage the store. "We now meet 10 times as many customers as we did formerly, and most of them need fertilizer. By pushing sales and advertising regularly, we are making Looper's Special Grower well known in the area."

The fertilizer plant was put into operation several years ago, but the owners have improved methods and added new machinery throughout that

time. All fertilizer mixed is in dust or powdered form.

At present, the most popular kinds are 4-8-6, 4-12-12 and 0-14-14. However, with the establishment of

the garden center, the company is prepared to make special mixtures with additional plant food elements.

All materials are shipped in by rail. (Turn to GARDEN CENTER, page 13)



MIXING fertilizer at the J. W. Looper & Swan Co., Dalton, Ga. Owners find that their garden center furnishes a good outlet for fertilizer. It is put up in bags from 100 lb. down to 5 lb.

# WHAT'S NEW

IN PRODUCTS • SERVICES • LITERATURE

To obtain more information about items mentioned in this department simply: (1) Clip out the entire coupon in the lower corner of this page. (2) Circle the numbers of the items of which you want more information. Fill in the name and address portions. (3) Fold the coupon double with the return address portion on the outside and fasten the edges with a staple, cellophane tape or glue. (4) Drop in the mail box.

## No. 6985—Business Machine Booklet

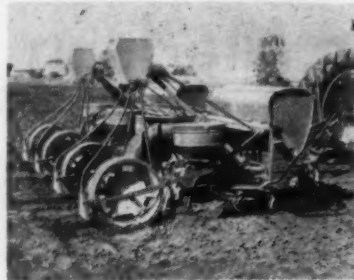
"Your Keys to Better Business," a free 35-page illustrated booklet has been made available by the Victor Adding Machine Co. The booklet, written for owners and executives of both large and small firms, features latest model Victor adding machines and calculators with information on applications, features, specifications and protective maintenance. For copies, check No. 6985 on the coupon and mail.

## No. 6987—700 Cu. Ft. Transport

Sam Killebrew, Inc., announces the "Bulk-Hauler" 700 cu. ft. capacity transport. It has four buckets and is designed to haul all bulky materials. A two cylinder air-cooled engine furnishes power to the hydraulic system which permits the operator to dump each bucket individually. The hydraulic system comes with both pressure and mechanical cut offs so that the buckets cannot be raised beyond a full dumping position of 45°. It can also be used as a bulk type spreader. More information is available by checking No. 6987 on the coupon and mailing.

## No. 6986—Herbicide, Insecticide Applicator

Noble Manufacturing Co. announces the development of a two-in-one ap-



plicator for applying insecticides and herbicides at the same time. The unit is primarily a granule-holding hopper that is actually two hoppers in one, the company says. It mounts on all planters, listers and seeders, and in operation, one hopper compartment supplies insecticide near the seed while the other feeds the 14 in. wide band of herbicide. Named the "Simul-Caster," it has a capacity of 32 lb. herbicide and 16 lb. insecticide. For more information, check No. 6986 on the coupon and mail.

## No. 6988—Spray Nozzle Manual

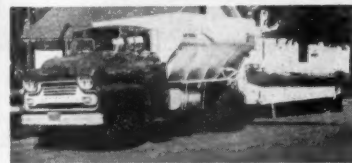
Spraying Systems Co. announces the availability of a spray nozzle manual for liquid fertilizer sprayers. The extensive catalog contains illustrations, blueprints, statistical data, specifications and information about spray nozzle design and application. All of the company's line of spraying equipment is described. For copies of the catalog, check No. 6988 on the coupon and mail to this publication.

## Also Available

The following items have appeared in previous issues of Croplife. They are reprinted to help keep dealers on the regional circulation plan informed of "What's New"

## No. 6983—Fertilizer Spreader

Tyler Manufacturing Co. announces the Tyler Spreader, designed to spread high analysis fertilizer accurately down to as low as 50 lb. an acre. The unit has a fast engaging, wheel driven stainless steel conveyor that allows free shifting of truck transmission and two speed axle without affecting the rate of appli-



cation. A hydraulically driven distributor is governed for constant speed regardless of truck engine speed. It has slot type compartment hinges, no bolts and no holes in the body for fertilizer to leak out or moisture to seep in, company literature said. An angled metering gate reduces compacting of material and increases conveyor chain life, the company says. For more information, check No. 6983 on the coupon and mail.

## No. 6978—Heavy-Duty Liner

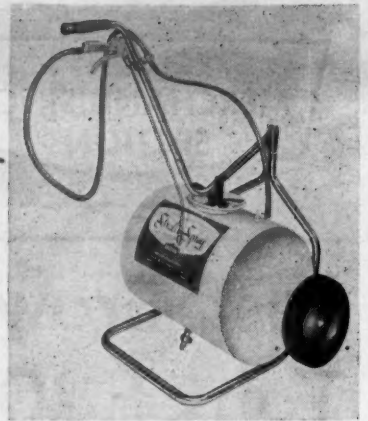
A heavy-duty liner made of chemically resistant material has been announced by Protective Lining Corp. The liner, predominantly for 55 gal. size, has a specially constructed round bottom to fit the standard steel drum neatly, the company says. The liner has a temperature range of from -25° to 230° F. It is chemically resistant to most chemicals, except very heavy acids in concentrated form, the company says. For more information, check No. 6978 on the coupon and mail.

## No. 6979—Dryer Bulletin

General American Transportation Corp. announces the availability of Bulletin 59-L pertaining to rotary drying equipment. The bulletin contains sections on selecting dryer types, construction, counter-current dryers, parallel-current dryers, indirect-heat dryers, return-current dryers and many other types. A section also deals with other rotary equipment. For copies of the bulletin, check No. 6979 on the coupon and mail.

## No. 6984—Hand Pumped Sprayer

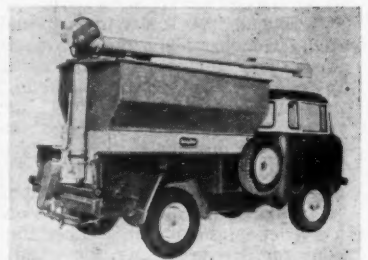
Announcement of a 6 gal. capacity sprayer, No. 1706 in the "Stroll'n Spray" series, was made by Universal Metal Products Co., division of Air Control Products, Inc. According



to the company, the 6 gal. sprayer has the largest capacity of any hand pumped, pressure type sprayer. The unit has large, rubber-tired wheels and the towing handle is designed so that it is also the pumping handle. The long leverage of the handle makes it easy to build and hold pressure in the sprayer, the company says. A special release valve prevents the build-up of excess pressure. Another feature is a liquid applicator built into the tank. The applicator throws a fan shaped pattern behind the sprayer. For more information, check No. 6984 on the coupon and mail.

## No. 6980—Bulk Delivery Unit

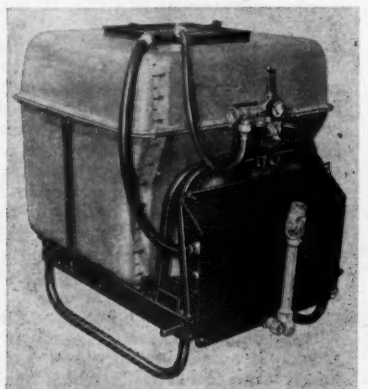
Bulk delivery of fertilizer with any type of truck is possible with auger-equipped truck bodies being offered by Knoedler Manufacturers, company literature stated. The galvanized steel body is available with weather-tight cover, sack hauling space and a hydraulically operated boom auger to reach storage facilities. Basic models



are the 12 ft. and 8 ft. lengths, with top box extensions increasing the capacity of each so that the actual range of sizes is 2, 2½, 3, 4 and 5 tons. Twin compartments permit hauling different types of fertilizers, the company says. A "guillotine" shut-off system is available to allow either compartment to be unloaded at any time. More information is available by checking No. 6980 on the coupon and mailing.

## No. 6981—Sprayer Unit

Hanson Equipment Co. announces the "Trak-Pak" sprayer unit. The unit mounts on any standard three-point hydraulic hitch. The unit can



be equipped with either a boom or Brodjet sprayer. A universal-joint drive shaft from the tractor power-

(Continued on page 12)

Send me information on the items marked:

- |  |   |
|--|---|
| <input type="checkbox"/> No. 6977—Fork Truck Attachment      | <input type="checkbox"/> No. 6983—Fertilizer Spreader               |
| <input type="checkbox"/> No. 6978—Heavy-Duty Liner           | <input type="checkbox"/> No. 6984—Hand Pumped Sprayer               |
| <input type="checkbox"/> No. 6979—Dryer Bulletin             | <input type="checkbox"/> No. 6985—Business Machine Booklet          |
| <input type="checkbox"/> No. 6980—Bulk Delivery Unit         | <input type="checkbox"/> No. 6986—Herbicide, Insecticide Applicator |
| <input type="checkbox"/> No. 6981—Sprayer Unit               | <input type="checkbox"/> No. 6987—700 Cu. Ft. Transport             |
| <input type="checkbox"/> No. 6982—Liquid Fertilizer Controls | <input type="checkbox"/> No. 6988—Spray Nozzle Manual               |

(PLEASE PRINT OR TYPE)

NAME .....

COMPANY .....

ADDRESS .....

CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS  
PERMIT No. 2  
(Sec. 34.9,  
P. L. & R.)  
MINNEAPOLIS,  
MINN.

BUSINESS REPLY ENVELOPE

No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

Croplife

P. O. Box 67

Reader Service Dept.

Minneapolis 40, Minn.



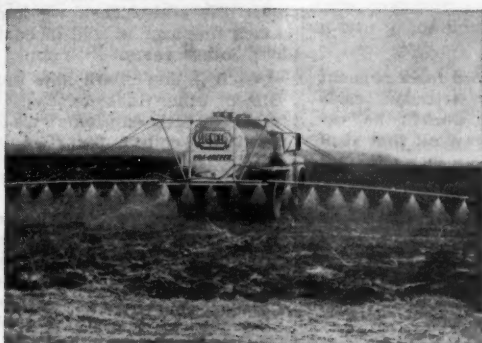
## Now! There are 4 Spencerizers:



1 Spencer "Mr. N" Ammonium Nitrate.



2 Spencer 45 Urea.



3 URA-GREEN\* and ANA-GREEN\* Solutions.



4 Spencer Anhydrous Ammonia.

This new urea prilling tower at Spencer's Henderson Works, Henderson, Kentucky — together with other Spencer facilities — now

enables Spencer Chemical Company to produce and market a complete "department store" of all four major nitrogen fertilizers.

# How 'Don't Just Fertilize . . . Spencerize' Can Help Increase Your Nitrogen Sales:

All around you, there's a sprightly new jingle that's catching the fancy of nearly every farmer in your trade area and winning big new nitrogen sales for you. This jingle is: "Don't just fertilize . . . Spencerize!" And it's Spencer Chemical Company's theme for the most concentrated and far-reaching promotion in their history.

"Don't just fertilize . . . Spencerize" is designed to build sales for you two ways. First, it makes the farmer want nitrogen—Spencer nitrogen! And second, it tells him that no matter what type of nitrogen he

wants, Spencer makes it. A major part of Spencer's new promotion is the emphasis on all four Spencerizers—Spencer "Mr. N" Ammonium Nitrate . . . Spencer URA-GREEN and ANA-GREEN Nitrogen Solutions . . . Spencer Anhydrous Ammonia . . . and Spencer 45.

All the leading farm magazines and key farm radio stations are carrying "Don't just fertilize . . . Spencerize" to farmers in your trade area. In song or in print, Spencer's exciting new promotion means extra nitrogen sales for you.

### December Is Your Last Chance!

December is your last chance to take advantage of the off-season storage discount for Spencer "Mr. N" Ammonium Nitrate! Contact your supplier now for a December shipment of "Mr. N" by truck or rail — or arrange to pick up your "Mr. N" at a Spencer warehouse sometime in December.

\*Trademark of Spencer Chemical Company



## Don't Just Fertilize . . . Spencerize

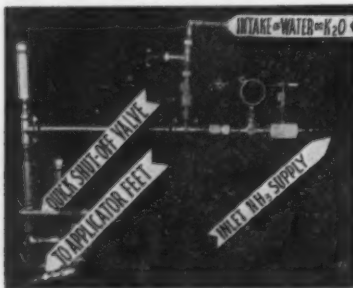
SPENCER CHEMICAL COMPANY, Kansas City, Missouri

Producer of 4 Nitrogen Spencerizers for hungry crops

take-off powers the pump-agitator assembly. An all-welded steel frame supports the tank, pump and sprayer unit. When not in use, the unit rests on its built-in skid stand, the company says. For more details, check No. 6981 on the coupon and mail.

## No. 6982—Liquid Fertilizer Controls

A device for fingertip control of liquid fertilization under pressure has been announced by Flo-Mix Fertilizers Corp. Called the "Brain Center," the unit converts anhydrous ammonia into aqua ammonia or combines with a potash solution to form ammonium potash, the company says. The unit is of stainless steel construction and consists of mixing chambers, valves, pressure gauge and tubes. The tubes connect by a series of hoses to the ammonia and water tanks and to nozzles which spray the liquid fertilizer into tiny furrows made by small blades. It can be installed on any type of farm tractor



and gives the driver instant control over the ratio of mixture and rate of flow of aqua ammonia or ammonium potash, company literature said. For details, check No. 6982 on the coupon and mail.

## No. 6977—Fork Truck Attachment

Vac-U-Lift division of the Siegler Corp. announces a fork truck attachment utilizing vacuum for handling of barrels, plate, sheet or stone. The at-



tachment is entirely self-contained, the company says, with four 10 in. Vac-U-Lift pads mounted directly to the frame which slips onto the forks of the truck. The pads are adjustable from 19 in. to 29 in. the long way of the fork and from 20 in. to 28 in. between the forks. Lifting capacity of each pad is 500 lb. with a total capacity of 2,000 lb. Power is furnished by a gasoline engine which drives the vacuum pump and contains its own reserve vacuum system to assure safety in the event of engine failure, the company says. The pendant control panel is in easy access to the operator. For more information, check No. 6977 on the coupon and mail.

## ACQUIRES PROPERTY OPTION

SANTA CLARA, CAL.—Monsanto Chemical Co. has acquired options on 450 acres of potential industrial property near Oxnard, Cal., Roy L. Brandenburger, Monsanto regional vice president, announced. Mr. Brandenburger said at least four tracts were involved in the property which includes more than a mile of Pacific shore line. The site is approximately 60 miles north of Los Angeles and is served by the Ventura County Railway.

SCHOENFELD AND MCGILLICUDDY



By AL P. NELSON

When tall, blue eyed Pat McGillicuddy came to work that fall morning about nine o'clock, Oscar had his back turned toward him, as the rotund, balding partner sat at his desk figuring discounts. But Pat saw that Oscar glanced up at the old Seth Thomas clock on the wall. If glances could burn, that clock would have melted.

Pat had had a good breakfast after a night attending an important farm meeting, and he was in good humor. So Oscar's clock glance didn't bother him too much. In fact, he even said, "Good morning" in a very cheerful manner. Oscar never answered when Pat came in late, and today was no exception.

Pat's glance rested for a moment on an overfilled wastebasket beside his desk. "Holy Cork!" he exclaimed. "Who threw all that stuff in there?"

"I did!" Oscar said turning in his swivel chair. "That oldt thirdt and fourth class mail in envelopes you chust stack on your desk day after day. It gets to be a terrible mess. Ach, I chust pushed it in the wastebasket, where it belongs. I safed you some time."

Pat's eyes flashed. "Oh, you did, eh? You don't have to save time for me, you sauerkraut eater. The stuff on my desk is mine, and you leave it alone."

Oscar's eyes were like ice. "It is mine, too," he snapped. "It's addressed to Schoenfeld & McGillicuddy. I'm Schoenfeld, dank Gott. But don't worry. I took off all the paper clips and rubber bandts from the letters and magazines. I safed something from that mess."

"Oh, you did, eh!" barked Pat. "Paper clips and rubber bands! That's all you think of. Why, the information in one of those agricultural bulletins, or one of those trade magazines is worth more than all the paper clips and rubber bands you could save in five years."

"Ach, now you are getting crazy," snapped Oscar with as much levity as he was capable of. "I safed you time, too. Now you don't have to sit for days with your feet on the desk readink that silly schtuff. Now you will haf time to get out on the floor and wait on customers. And you will have time to go oudt and collect money. I notice you like to haf some every Saturday—when you ain't drawed it in advance."

Both men were panting hard now, and Tillie Mason, the plumpish bookkeeper got to her feet. "Well, men," she said, "you know my contract. No work when you men argue. I'm going over to Happy's for a malted."

Neither Pat nor Oscar heard her. "I'm going to sort through that wastebasket and look at every blasted piece of paper you threw away, even if it takes me all day!" Pat burst forth.

Oscar rolled his eyes ceilingward with a look of extreme disgust, swirled his swivel back to his desk and began figuring discounts.

"Ach!" he muttered, "I don't see how we can affordt you, McGillicuddy. You are the mostt stubborn fool I haf ever seen."

Pat said nothing, but with a grim face began sorting the material thrown into the basket. Some of the third and fourth class letters had been torn in half, indicating considerable anger on the part of the thrower.

"Holy Killarney!" Pat suddenly exclaimed. "Oscar, you threw away an

important letter and questionnaire from the state agriculture commissioner. I had it on my desk. I've been meaning to answer it."

"Ach, what does he want? Votes?"

"No, of course not. He wants to know how much fertilizer we sold this year!"

Oscar swung around in his swivel chair. "Ach, what business is that of his? This is our business. He shouldn't get so noseey."

Pat sighed in exasperation. "Oscar, this department is rendering the state a wonderful service. They compile fertilizer tonnage figures from all over the state. Then we know how much fertilizer is sold in comparison with other years."

"Ach, I don't care how much fertilizer other dealers sell," Oscar snapped. "It's only what we sell and what we collect for that interests me."

Pat looked pityingly at Oscar. "The department of agriculture needs this information so that it in turn can give us the total picture of the state's fertilizer situation. Then manufacturers will know how to gauge their fertilizer production and sales. It's the duty of every fertilizer firm to fill in this questionnaire."

"McGillicuddy, if you wouldt schtop helping other people in the fertilizer business and schart helping us more, we wouldt make more money," Oscar sneered. "Are you in business with me to make money for us, or are you in business to help the government, and the farmers and the Kiwanis and the Chamber of Commerce and a lot

of other organizations where you waste your time?"

Pat looked levelly at Oscar. "Lots of times I wonder why I am in business with you. Making profit is all right, Oscar, but there are also many other business factors to consider. Remember, you can't take your money with you."

"No, but I can know I got some while I am here!" came back Oscar, his face white. "I don't haf to wake up nights from mortgage nightmares and worrying if I can get advance on my weekly salary like some other people I know!"

Pat knew whom Oscar meant, but he rose to his feet and took the letter and questionnaire from the state commissioner of agriculture. "I'm going over to Happy's and have coffee while Tillie has her malted. She and I are going to work on this questionnaire all day, if necessary to get it completed. This is one fertilizer man who is going to join the rest of those future minded men who religiously provide the state with information they can use to help us!"

After Pat left, Oscar stared at the wall, his lips tight. Then he grabbed a pen and paper and started to write:

"Dear Croplife:

"What's the matter with you fellows? Why don't you run more want ads about dealers that want to sell oudt so I can buy one of them? Business can't be so goot that nobody wants to sell oudt. Am I the only dealer with a lousy partner I can't get along with because he is so stubborn?"

Oscar Schoenfeld.

## GARDEN CENTER

(Continued from page 9)

The boxcars are stopped just outside the building, and ingredients are augered into basement storage bins. A small tractor with a front end power scoop fills a buggy with the material, where it is weighed, and then dumped into a chute. From there it is lifted by auger into bins above the mixer.

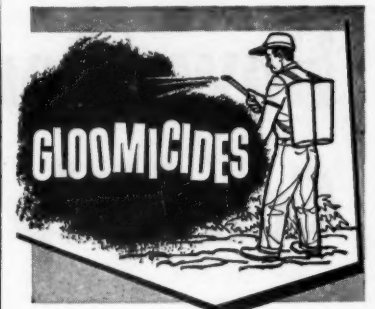
The material is then ground to a powder, run over a screen and then into the mixer. The complete mixture is sacked and stored for future sales.

"The most important thing about making fertilizer is being able to sell it," smiled Mrs. Swan. "All our advertising of the different items brings people into the store, and when they buy nursery stock, seed or garden tools, we have an opportunity of selling fertilizer. Naturally we recommend Looper's Special Grower."

While not every store can mix fertilizer, a growing number of garden centers and farm stores are getting equipment to make their own brand of fertilizer.

Some of the advantages in this, according to Mrs. Swan, are that the owner can mix fertilizers fitted to the needs of local soils and plants. He can get many extra sales by putting the material in several size packages. He can also advertise it along with other store items, display it where store traffic is heaviest, and cash in on impulse buying.

Most important of all, it can be used as a long profit item. Mrs. Swan has found that people buying a special brand have no basis of comparison with prices in other stores. Therefore the management can set a reasonable price and have no one object to it.



A man applying for a job asked the interviewer, "Will your company pay my hospital insurance?"

"No, you pay for it. It'd be deduct- ed from your check."

"Last place I worked they paid for it."

"Did they give you life insurance, too?"

"Sure did . . . and a Christmas bonus, coffee breaks, and . . ."

"Why did you leave?"

"The company folded."

★

The doctor stopped the nurse and asked, "What is that skinflint patient complaining about now?"

The nurse replied, "He says he got well before all the medicine was used up."

★

"I'm sorry if our hammering disturbed you. We were hanging a picture."

"Oh, that's all right. I just came over to ask if it was all right if we hung a picture on the other end of the nail."

★

Reporter: "Now that you are wealthy are you ever bothered by the friends you had when you were poor?"

Man of Wealth: "I never had any friends when I was poor."





PERSONNEL and equipment of the M & M Air Service, a company which Roy Sims uses during the crop dusting

season. Also shown is pick-up belonging to Bes-Tex Insecticides, of which Mr. Sims is manager.

## FAST GROWING

(Continued from page 9)

also on the lookout for extra work in the crop dusting department. He calls on each dealer every three or four weeks, helps them set up displays, gives them instructions on selling and on new products.

Mr. Sims has also made a careful study of advertising and labor problems. He advertises on radio and in the local daily newspaper but says newspaper advertising is most effective. Much of his advertising dollar is used seasonally when it counts most.

Labor has been held to a minimum by using seasonal workers. He also finds that extra equipment can be rented for a few short weeks much more economically than by buying it.

"In addition to myself there are only three others on a year-around basis," he said, "my salesman Grady Capps, a warehouse man and the man in charge of the termite control division, Dub Faulks."

In trying to keep something going every month of the year, Mr. Sims contacted Mr. Faulks who had had years of experience as a pest control operator. By joining forces, they increased both businesses at lower operational costs.

"We use about the same kind of insecticides," said Mr. Sims. "We can use the same trucks, same advertising, save money on advertising and records, and quite often sell a farmer customer a pest control job."

The Bes-Tex Insecticides believes in holding a tight rein on credit and getting a legitimate profit.

"If you can do a good job for a farmer, he won't be shopping around for cheaper insecticides," Mr. Sims explained. "We handle leading national brands, form agreements with only the most reliable crop dusting companies and try to visit personally every farmer on whose place we work."

"We also check closely into the customer's credit rating. If he is completely reliable, we may carry him

awhile. Otherwise, we get the cash when the dusting is completed. During the two years in business, our credit losses have been very, very small."

Mr. Sims does not sell fertilizer except in small packages. One reason is that a very good friend already in the fertilizer business helped him get

started with insecticides, and now the two firms work closely together in swapping customer lists and solving mutual problems.

"One thing I'd like to say in conclusion," Mr. Sims pointed out, "is that a farm chemical dealer must watch those off-seasons when sales won't sustain operating expenses. We've overcome this somewhat by pushing out 27 retail items and by prolonging the season with cotton defoliation products."

"By cutting down our labor force from eight or 10 to the four of us during the winter months, we've managed to make a profit even in cold weather. And, of course, the termite control department work goes on throughout the year."

"Another thing I'd like to add is that a dealer must understand farmers, be able to speak their language and try to help them increase profits. And, of course, he must keep abreast of new products and new methods. The field is changing rapidly, and the dealer must stay up with it. Otherwise, his customers will go to some dealer who does know most of the answers."

## STARTS PRODUCTION

NEW YORK—At its Hodge, La., paper mill, Continental Can Co., Inc., has started up production of Clupak paper, announced G. E. Amerman, president of Clupak, Inc. Continental Can's Clupak extensible paper unit has been installed on its No. 4, 246-in. wide machine, which has a production capacity of approximately 250 tons a day, and will produce Clupak paper for general converting purposes, with special emphasis on multiwall sacks.

## Books on Fertilizers And Their Use

### FUNDAMENTALS OF SOIL SCIENCE—Third Edition

By C. E. Millar, late Professor Emeritus of Soil Science; L. M. Turk, director; and H. D. Foth, associate professor of soil science, Michigan State University.

This text completely revises and brings up to date the second edition. Special attention is given to progress made in the basic principles of soil science since the publication of its predecessor. This edition includes more emphasis on soil texture and the concept of the texture profile, more discussion of the influence of the soil forming factors on soil development, and more facts about clay minerals to provide a clearer understanding of the differences in the behavior of soils. 496 pages, illustrated. 6x9 1/4" ... **\$7.75**

### SOIL FERTILITY AND FERTILIZERS (1956)

Samuel L. Tisdale and Werner L. Nelson

An advanced college text, for juniors and seniors, following backgrounding course in soils. Covers elements required in plant nutrition, their role in plant growth, and the soil reactions to these nutrients. Several chapters on manufacture, properties and agronomic value of fertilizers and fertilizer materials. Latter part covers soil fertility evaluation and use of fertilizers in sound management program. Dr. Tisdale is Southeastern regional director of the National Plant Food Institute and Dr. Nelson is with the American Potash Institute. 430 pages, cloth bound ... **\$7.75**

### PLANT REGULATORS IN AGRICULTURE

Dr. Harold B. Tukey

Published September, 1954. A text book giving background material for county agents, farmers, citrus growers, nurserymen, gardeners; providing fundamentals and general principles; covers encouragement of roots by plant regulators, control of flowering and fruit setting, parthenocarpy, abscission, prevention of preharvest fruit drop, delaying foliage and blossoming, maturing and ripening, inhibition of sprouting and weed control. Brings together specialized knowledge of 17 authorities in the field, with two chapters written by Dr. Tukey, head of department of horticulture at Michigan State College. 249 pages ... **\$6.50**

### THE CARE AND FEEDING OF GARDEN PLANTS

Published jointly by the American Society for Horticultural Science and the National Plant Food Institute.

An entirely new, one-of-a-kind book. It is designed to acquaint readers with nutritional deficiency symptoms or "hunger signs" of common yard and garden plants including lawn grasses, shrubs, flowers, garden vegetables, and cane and tree fruits. It stresses plant "feeding," or "what makes plants grow." Sixteen of the nation's leading horticultural authorities collaborated in its preparation. Cloth bound, 300 pages of text and illustrations including 37 pages in full color ... **\$3.00**

### AUXINS AND PLANT GROWTH

A. Carl Leopold

A 344-page book, complete with bibliography, appendix, and index, discusses the fundamental and applied aspects of growth hormone and synthetic auxin action in plants. These are of interest to all workers in agricultural chemicals—for weed control, flowering control, fruit set, flower or fruit drop and plant propagation. The text is divided into two sections, (1) fundamentals of auxin action, and (2) auxins in agriculture. These cover developmental effects of auxins, the physiological and anatomical effects of their application, the chemical nature of growth regulators, and methods of applying auxins and their persistence in plants and soils. Other subjects covered: rooting, parthenocarpy, flower and fruit thinning, control of pre-harvest fruit drop, flowering, dormancy and storage, herbicides, miscellaneous uses of auxins, and potentials of auxins and auxin research. **\$5.00**

Published by University of California Press

### ECONOMIC AND TECHNICAL ANALYSIS OF FERTILIZER INNOVATIONS AND RESOURCE USE

By E. L. Baum, Earl Heady, John Pesek and Clifford Hildreth.

This book is the outgrowth of seminar sessions sponsored by TVA in 1954. Part I—Physical and Economic Aspects of Water Solubility in Fertilizers. Part II—Examination of Liquid Fertilizers and Related Marketing Problem. Part III—Methodological Procedures in the Study of Agronomic and Economic Efficiency in Rate of Application, Nutrient Ratios and Farm Use of Fertilizers. Part IV—Farm Planning Procedures for Optimum Resource Use. Part V—Agricultural Policy Implications of Technological Change. It presents new methodological techniques for more efficient handling of research problems related to fertilizers and provides more meaningful answers to problems of practical application ... **\$1.95**

### HUNGER SIGNS IN CROPS—Second Edition

A symposium—published jointly by the American Society of Agronomy and the National Plant Food Institute.

A comprehensive study of nutrient-deficiency symptoms in crops compiled by 19 of the leading authorities in the field. It is being widely used by college professors, research and extension specialists, industrial chemists and agronomists, county agents and teachers of vocational agriculture. Many farmers have found it of particular value in planning their fertilizer programs. Cloth bound, 370 pages, 242 illustrations, including 124 in full color ... **\$4.50**

### USING COMMERCIAL FERTILIZER (1952)

Malcolm H. McVickar

Dr. McVickar is chief agronomist for California Spray-Chemical Corp., Richmond, Cal. The book deals specifically with commercial fertilizer, how it is produced and how to use it. It is non-technical. It includes chapters on how to measure fertility of soils, secondary and trade-element plant foods. 208 pages, 106 illustrations, cloth bound ... **\$4.00**

### COMMERCIAL FERTILIZERS, Their Sources and Use—Fifth Edition (1955)

Gilbeart H. Collings

Based upon the author's practical experience as an experimental station agronomist and teacher, and incorporating information on recent developments by agronomists, chemists, engineers and fertilizer manufacturers. Authoritative on problems concerning commercial fertilizers and their use in gaining larger yields. 160 illustrations, 522 pages ... **\$9.50**

### APPROVED PRACTICES IN PASTURE MANAGEMENT (1956)

M. H. McVickar, Ph.D.

Outlines clearly and concisely how to have productive pastures to furnish high-quality forage for livestock, economically and efficiently. Written for grassland farmers. Covers the important activities associated with establishment, management and efficient use of pastures as grazing lands or as a source of fine winter feed for livestock. It is as specific as possible for all U.S. pasture areas. Twenty chapters, 256 pages, illustrated ... **\$3.00**

### MANURES AND FERTILIZERS

A survey by the Ministry of Agriculture and Fisheries, dealing with soil analysis, inorganic fertilizers, waste organic substances and principles of manuring. In language to give the farmer basic principles of increasing soil fertility by the application of natural organic manures and synthetic inorganic fertilizers. Many important tables on quantitative data ... **\$2.50**

## Texas Store Adds Farm Chemical Lines

SAN ANGELO, TEXAS—The Palmer Feed & Supply Co. has expanded their new store to carry a full line of fertilizers, insecticides and many farm supplies.

R. B. Harrell, for many years a district feed salesman, is now a full partner with W. L. Palmer, who operated a smaller store at another location.

## DEALER NAMED

CALDWELL, IDAHO—Collier Carbon & Chemical Corp., Los Angeles, announces the appointment of Feed Service Co. of this city as a certified Brea brand fertilizer dealer. Products to be handled under the dealership include aqua ammonia, liquid ammonium phosphate, prilled ammonium nitrate, ammonium sulfate, pelleted fertilizer and other complex liquid mixes.

## Order From Croplife

Reader Service Department  
P.O. Box 67  
Minneapolis 40, Minn.

(enclose remittance)

# FARM SERVICE DATA

## EXTENSION SERVICE REPORTS

Weed growth in Texas pastures was heavy this fall. G. O. Hoffman, extension range specialist, says these uncontrolled weeds use from four to 11 times more water for growth than grasses. They rob livestock of good grazing since weedy pastures produce very little forage for winter use.

Mr. Hoffman said to obtain more grass for next year's grazing, farmers control weeds by spraying with 1 lb. of 2,4-D per acre. Usually one application will give good weed control throughout the growing season. Weeds must be sprayed in early spring when they are about 6 in. tall and growing rapidly.

Many demonstrations have indicated that grass production is from two to 10 times more on sprayed pastures as compared to unsprayed ones. To cite an example, says Mr. Hoffman, a demonstrator who spent \$2 per acre for weed control and practiced deferred grazing during the summer obtained a \$25 return per acre from increased grass. This amounts to growing over a ton of forage per acre for a cost of \$2.

★

Chlorosis is a condition which results when chlorophyll (the green coloring matter in plants) fails to develop or is destroyed. Iron chlorosis normally appears first on young leaves. The leaves of chlorotic plants range from light green to yellow to almost white.

Iron is necessary for the formation of chlorophyll, says Dr. W. F. Bennett, extension soil chemist. When iron is unavailable for plant use, chlorophyll fails to develop properly and plants exhibit chlorosis. Iron chlorosis is most prevalent on members of the grass family (such as St. Augustinegrass, Johnsongrass and grain sorghum), certain fruit trees (citrus and peaches), many vegetables (particularly beans) and many flowers and ornamentals. Most soils on which iron chlorosis occurs are well supplied with iron, but it is in a form unavailable for plant use.

Dr. Bennett says chlorotic plants are found all over Texas, but are more prevalent in areas with alkaline, calcareous soils. In central, south and west Texas it is a fairly common and serious problem.

To control iron chlorosis, it is necessary to treat the soil so that iron becomes available, or else provide supplemental iron as a spray or soil application. Application of large amounts of well-rotted organic material on a regular basis makes the soil less alkaline, resulting in more iron becoming available. Well-decomposed compost plus 1 lb. powdered sulphur per 100 sq. ft. can also be used to make the soil less alkaline. Acid peat

can also be used. Iron sulfate or iron chelates are good sources for providing supplemental iron.

Dr. Bennett adds that a new leaflet has been released by the extension service that discusses iron chlorosis.

★

When Olin J. Jackson bought his farm near Bartow, Ga., 10 years ago, it was making about three-quarters of a bale of cotton and averaging about 20 bu. of corn to the acre.

Now, because of following good fertilization, insecticide and cultivation practices, Mr. Jackson is making a bale and a half of cotton to the acre, and about 60 bu. of corn per acre.

A cooperater with the Central Soil Conservation District, Mr. Jackson has planted lupine for winter cover crop every year, and has built up the soil fertility with plowing in litter from field peas and oats and soybeans, and has stopped the loss of top soil with terraces and waterways.

Mr. Jackson followed soil test recommendations, fertilizing with 600 lb. of 5-10-10 at planting, with two sidedressings of 20% liquid nitrogen. Twelve applications of poison were made for weevil control.

"The first and last poisonings are the important ones," Mr. Jackson said. "You want to catch the early weevils, then at the last, when the bolls are large and you think you don't have any weevils, you can get your cotton ruined if you fail to poison."

Mr. Jackson grows soybeans after oats on 40 acres, uses a rotary cutter on the straw, and grows corn on 75 acres and milo on 20 acres.

★

A four-step soil fertility program is being launched in Ware County, Ga., with the help of the agricultural extension service.

About 75 farm leaders took part in a discussion of the program at a meeting in Waycross. Jim Bergeaux, agronomist, University of Georgia, listed the steps in the soil fertility program as: 1. Soil test; 2. Proper liming; 3. Use right grade and right amount of fertilizers.

Mr. Bergeaux showed that Ware County farmers were using 81% of the wrong grade of fertilizer. Changing to the right kind alone could amount to thousands of dollars saved and better crops.

Frank Boyd, agronomist of V-C Fertilizer Co., Birmingham, Ala., discussed soil testing. He said this test tells which kind of fertilizer the farmer should use and takes the guessing out of buying fertilizer.

Dr. Irvin Walford of Southern Nitrogen Co., Savannah, spoke on the importance of use of good seed along with soil fertility. Tom Boland, county agent, said inadequate use of nitrogen has long limited crop production in Georgia.

Pointing up the need for soil testing the farm specialist said that only 255 soil samples from Ware County had been tested through the extension service from Ware when actually 4,000 samples were needed.

John Preston of Tifton, tobacco specialist for the extension service, spoke on fertilizer for tobacco, disease control, and plant quarantine.

The soil fertility committee appointed to get the program moving

in Ware County is composed of Charles McDonald, W. A. Frier, Mike Minches, T. W. Booth, J. Marvin Strickland, Henry A. Booth, Jr., Joe C. Merritt, Nelson Pruitt, Jack Gillis, J. L. Miles, and J. M. Strickland.

★

High-analysis fertilizers usually provide cheaper plant nutrients than lower analysis fertilizers, reports J. C. Lowery, Alabama Polytechnic Institute extension agronomist. And they are equally as effective as the higher-priced product. To see if another brand or analysis of materials is cheaper, Mr. Lowery advises computing the cost of a pound of the various plant nutrients in the fertilizer you have been buying and comparing the results with another product.

Buying fertilizer cheaply is good business, says the agronomist. But farmers should be sure to buy the proportions of nitrogen, phosphorus and potassium suggested by soil tests and the nutrient requirements of the crop. Also, they should make certain that the high-analysis fertilizer contains sulphur, Mr. Lowery adds.

★

South Carolina's small grain growers were urged to clean and chemically treat all small grain seed prior to plantings, says F. H. Smith, Clemson extension plant pathologist.

"It is very important that chemicals be used at the recommended dosages, because lesser amounts will not give adequate control and amounts in excess of the recommended dosage will cause injury to the seed," Mr. Smith said. "Seed should be thoroughly treated and allowed to remain in bags or other containers for at least two days before planting. Treating seed in the grain drill is usually ineffective," he added.

Mr. Smith says the loose smut disease of barley or wheat cannot be controlled with seed treatment chemicals. Growers who wish to control this disease should either plant seed known to be relatively free of loose smut or to treat loose-smut-infested seed by use of the new anaerobic method which will free the seed of smut.

Research at Clemson and at other agricultural research stations indicates that cleaning and treating small grain seed will often increase grain yields by as much as 3 to 5 bu. per

acre and hay yields from 800 to 2,000 or more lb. per acre.

The cost of cleaning and treating small grain seed is usually less than 25¢ per bushel. The value of returns on this investment is usually great, and any growers who follow these important practices each year realize greater profits from their grain.

★

Liquid fertilizer and dry fertilizer were both used in a study at Georgia Coastal Plain Experiment Station in Tifton to help determine the comparative value of oats and rye pastures in a winter and spring beef cattle fattening program.

This was an experiment initiated to utilize to a maximum available grazing followed by drylot feeding to a desirable weight and finish. It was a cooperative study between the forage crops and animal husbandry departments of the Georgia Coastal Plain Experiment Station and the animal husbandry branch division of the U.S. Department of Agriculture.

In addition to the direct comparison of oats and rye, information was desired on the feasibility of mixing early and late oat varieties to determine if the grazing season could be extended, and also to determine if a mixture of oats and gator rye would produce more total grazing than either crop alone.

Anhydrous ammonia at the rate of 91 lb. of nitrogen per acre was applied when the land was turned, and 500 lb. of 4-12-12 fertilizer was applied at the time of planting, which was on Oct. 21 and 22, 1958. The study was begun Dec. 31, 1958 and concluded May 27, 1959, a 147-day grazing and feeding period.

At the conclusion of the study a progress report was made which showed that measured by total steer gain, gain per acre of pasture, efficiency and economy of gain, and margin per steer above steer and feed costs, the best performance was obtained from steers on the early-late oats mixture and the poorest from steers on the rye.

The progress report was made by Dr. D. W. Beardsley, Warren H. Marchant, Dr. W. C. McCormick, and B. L. Southwell, all of the Georgia Coastal Plain Experiment Station staff, who conducted the study.

## Displays Increase Sales



SMITH FEED STORE, Edna, Texas, has increased the sale of small-packaged fertilizers and plant foods by displaying an assortment of them on a shelf which extends out from the wall on which hangs the blackboard where the company lists its commercial fertilizers and prices. Customers stand back from the board to study fertilizer prices and are "exposed" to the package specialties on display immediately to their right.

## what's NEW?

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Heavy Duty  
Trailer  
Sprayer  
230-gallon  
Plasti-Chem  
Tank

3-A BOOM — 8-row non-corrosive boom designed for roughest usage of commercial operator. Stainless finish.

Ideal for applying corrosive chemicals.



Nurse Tanks in 500 and 1,000 gal. sizes available.

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**EXAMINING RESULTS** of a cotton insect control program carried on as a dealer service promotion at Greenwood, Miss., are left to right: L. C. Murphree, entomologist with Coahoma Chemical Co., Clarksdale, Miss.; Luther Wade, Greenwood plantation owner, and Mike H. Carter, manager of Mississippi Farmers Supply Co., Greenwood.

## Fifteen Dealers Reap Profits From Cotton Insect Project

Extra profits are coming to at least 15 Mississippi Delta cotton farmers this year as a result of a service program carried on by a Greenwood, Miss., farm supply store.

Assistance to farmers in their cotton insect control work was the program promoted during the summer by Mississippi Farmers Supply Co-operative of Greenwood, of which Mike H. Carter is manager.

Through a program worked out with the farmers and with cooperation of technical representatives of the agricultural chemicals division of Hercules Powder Co., field men of the supply firm were able to contact more farmers and provide them with better service.

Mr. Carter sees the program as a model and plans to base his operations in future years on the same sort of operation.

"We can just do a better job of service and our men can help more farmers under this plan," he said.

The program worked like this:

Cotton farmers contacted for co-operation in the program agreed to hire their own cotton insect scouts. These scouts provided the farmers with regular reports on infestations of insects.

**Mr. Carter's field men—who work on a year-round basis—then contacted the farmers at regular intervals and advised them on the need for insecticide applications.**

Hercules Powder Co. provided a supervisor for the scouts who kept records for the entire operation.

In other years, Farmers Supply field men had often found themselves in the position of checking insect conditions for farmers on whom they called and thus limited the scope of their operation.

By being able to call on the farmer and have him already familiar with the situation, the field men were able to serve more customers.

These field men advise farmers all during the year on their farming operations, including recommendations on fertilizer, seed treatment, use of herbicides and insecticides and a myriad number of other practices.

**Cooperating in this year's program were 15 farmers. These farmers placed 7,060 acres of cotton into the plan.**

The insect control program used was based on the use of toxaphene and toxaphene-DDT 2-1 mix. Farmers started early in the season to get the crop off to a good start, protected the crop all season long through a supervised, planned program of insect control.

The actual control program was the same program used last year by three farmers in the Greenwood area in a demonstration which was conducted by Hercules Powder Co.

Farmers generally were pleased with the results obtained under the program.

**Many farmers in the Mississippi Delta employ commercial cotton scouts who serve many individuals. Some observers of the program used this year feel that the farmer obtains more thorough scouting and better information by using a scout under his immediate control.**

Costs of the scouts were negligible, Mr. Carter said.

Luther Wade, large plantation owner in the Greenwood area, was high in his praise of the program as carried on this year.

He told a group of farmers on a tour of the Greenwood section that he had obtained excellent results.

**The Farmers Supply field men who worked with the farmers were Vernon Alken, Bob White, and Billy Jones. All advised specific farmers all during the season.**

Larry Clay, a Mississippi State University graduate, supervised the scouts.

Working with the Farmers Supply personnel all through the season was R. D. Griffith, Hercules technical representative from the Greenville office. Mr. Griffith is a graduate entomologist and is familiar with the situation in the area. Last year he supervised Hercules' demonstrations all over the state.

**Further evidence of the cooperative nature of the program was the**

**service rendered by insecticide formulators who worked right along with Farmers Supply field men.**

L. C. Murphree, entomologist of Coahoma Chemical Co. of Clarksdale, Miss., was in close contact with the program all during the season and provided technical information as needed to farmers, scouts, and field men.

Mr. Carter sees the three-way co-operation of manufacturer, formulator, and supplier as providing an ideal situation for the improvement of service to customers.

Farmers Supply serves LeFlore

County and all adjoining counties and usually services around 100,000 acres of cotton. There are around 350,000 acres of cropland in the entire area.

**The cooperative was established in 1945 and provides a full range of supplies for farmers.**

Charles S. Whittington of Greenwood, who farms 10,000 acres of cotton, is president.

Mr. Carter, the manager of the co-operative, has been in charge of operations since 1948 when he came to the organization from the Newellton Elevator Co. at Newellton, La.



By Emmet J. Hoffman  
Croplife Marketing Editor

## OVER THE COUNTER

The minimum size usually considered satisfactory for a retail farm supply store is 15 by 21 ft., inside measurements, although many sales rooms in country elevators and farm stores are smaller than this area. A 15 by 21-ft. store might be arranged to display enough fixtures to sell \$15,000 worth of farm supplies, besides handling customers for the bulky items such as feed, seed, fertilizer or fencing which are usually warehoused, says F. E. Hartzler, College of Emporia (Kansas).

Whether remodeling or building a new retail room, it is desirable to have it located to take advantage of the normal traffic, that is, the feed, seed and fertilizer customers and farmers who are selling grain.

An important consideration is to have the normal traffic routed so as to take it past as much of the displayed merchandise as possible. Avoid the pattern which allows the feed mill customer to walk up to the counter, pay his bill and walk out of the plant without bringing him face to face with other farm supplies in the store.

There is an advantage—when adding a retail room to an elevator—to have it adjacent to the present office and scale room. This allows traffic to enter the retail room from both the present office and scale room.

Such a plan will permit the sales staff to use the same cash register for both elevator and retail store purposes, and by judicious placement of the entrance, traffic can enter the retail room from the elevator.

### Short Wall Desirable

For best traffic purposes, the wall between the scale room and the retail outlet may be cut down to about 3 ft. high; the entrance to the scale room should be open.

Most managers may like the office set back. This will give them a chance to keep up their book work and correspondence in semi-privacy.

### Limited Exits Best

As a general rule, it is better to have a limited number of exits from a building where merchandise is small. Two doors are plenty and one might be adequate. You will have to decide this, taking into consideration the amount and location of the parking area. However many you decide on, be sure that one is convenient to the parking space.

The outside shelves may be built following the super market style, gradually sloping up on the inside. Avoid putting any stock closer than 15 inches to the floor. Such stock is apt to be overlooked and it would be difficult to maintain. The shelving should vary in heights with the taller shelves near the bottom to handle larger, heavier merchandise.

The best plan would be to make platforms roughly 12 inches high, and then set regular fixtures on top of these. The best and most useful fixtures for handling merchandise from rope to antibiotics are masonite with adjustable shelving. The center fixture, however, will probably be the most important one. This would be the place to start with a platform

about 8 in. high. Then use the portable and adjustable masonite fixtures when showing small merchandise. These can be taken out completely at times when you want to display such large items as brooders.

### Display Windows

Display windows present a special problem. The most recommended window for this type operation is a full length window with a display aimed toward automobile traffic, since the walking traffic will be at a minimum. However, the window display should be a regular floor display counter, open on both sides so that it will be possible to sell from it.

In a few cases, it may be best not to have display windows or any windows at all. Air conditioning, fluorescent lighting and light-colored paint will make a bright pleasant store without windows.

The most important area from the standpoint of sales promotion will be the center platform which should be built so as to use shelves or not as needed. The important displays can be prominently displayed here. All types of merchandise from small bottles of insecticides to lawn mowers can be featured here.

Keep in mind that the old rule: The more unnecessary an item is, the closer it should be to the front of the store, is an excellent one to follow. Another version of the same rule is also good: The more an item is an impulse item, the closer to the door it should be located.

Farm store managers will find several advantages to a small store. First of all it is not expensive. Second, it could be stocked for a reasonable amount of money. Third, it will be a good traffic builder, if sound management and marketing procedures are followed.

There is one danger in this type of operation, too, but wise planning will make it a blessing. Because of the very nature of the stock, the store will have to carry a short stock and use good control. To get his money out of his operation, the manager will have to get good stock turns and have a minimum of dead merchandise.

### TO BUILD PLANT

**ROCK VALLEY, IOWA**—The Farmers Elevator Co. will build a new fertilizer blending plant with a capacity of 500 to 1,000 tons.

# WEED OF THE WEEK

Mr. Dealer—Cut out this page for your bulletin board



## Horse Nettle

(*Solanum Carolinense*)

### How to Identify

This plant has an erect stem, loosely branched, and covered with yellowish spines. Height of the plant may vary from one to four feet. Leaves are alternate, oblong, wavy-edged or lobed, with yellow prickles on petioles, midrib and veins. Flowers are white or bluish, 5-lobed, about an inch across.

### Where Horse Nettle Is Found

The weed occurs in fields, gardens, and waste areas, particularly those with sandy soils. Its distribution is rather general, with more in the eastern half of the nation. The plant is a native of North America and is a perennial, reproducing by seeds from creeping rootstocks. It flowers from May to September and seeds from July-November.

### Control of Horse Nettle

A number of chemical herbicides are available to control this weed, although application of these materials may not be economical unless a small infestation is to be controlled. Agricultural authorities keep a watchful eye on alfalfa, clover and lespedeza seed lest horse nettle seeds should be included with the desired plantings and lead to an infestation. When once firmly entrenched in a field, a system of frequent and intensive cultivation is recommended by some weed control experts. Farmers are cautioned, of course, against the purchase of seeds containing horse nettle seeds. In some states, if these weed seeds comprise as much as one tenth of one percent of the total crop seeds, the label must give information on the number of weed seeds per pound.



## Industry Needs More Data on Agricultural Losses from Pests, Science Academy Is Told

WASHINGTON—"We just don't know what we are doing," commented Dr. Richard Wellman, Union Carbide Co., at the Conference on Losses Due to Agricultural Pests, held Nov. 4-5 at the National Academy of Sciences-National Research Council Building in Washington, D.C.

Dr. Wellman explained to the 60 members and guests of the agricultural board committee on agricultural pests that both the farmer and industry need to become more efficient. He said one of the most helpful devices would be the development of accurate loss data from which industry could instigate a definite control program.

Insects cause twice as much damage every year as forest fires, according to Dr. Wellman. "Yet, until we can be given some indication of where to start to correct this situation, it

is impossible for industry to do much."

Speaking for the USDA and the Agricultural Research Service, Dr. T. C. Byerly, deputy administrator, said there is no other area in agriculture as important as that of agricultural pests, and the losses caused by them. Dr. Byerly said it is absolutely essential to have an accurate account of agricultural pest losses for both industry and the farmer.

It is often difficult to measure losses accurately, he continued. For example, several diseases are affecting the cotton industry in the southern states. "So far, no effective control measures have been developed thereby resulting in greatly reduced yields in some areas. Texas is not affected with these diseases," said Dr. Byerly, and the cotton industry could be moved to this region. "But, what would happen to the South? What could you grow on some of these small 75-acre farms? It's almost impossible to measure this type of loss, yet it must be regarded as part of loss data," he added.

These two addresses were background for discussions of the committee and subcommittee members during the two-day conference on agricultural pests. Representatives to the conference included some of the top agricultural scientists of industry, government, and the land-grant colleges.

The committee on agricultural pests was set up under the agricultural board of the National Academy of Sciences-National Research Council to obtain background information and to stimulate research directed towards developing new pest-resistant plants and animals and new pest control materials. This kind of research requires more data and understanding of losses caused by pests.

Six subcommittees operate under the parent committee: Insects, nematodes, plant diseases, vertebrate pests, weeds, and biological control of soil-borne plant pathogens. During the four-year life of this committee a greater interest has been shown among research workers in the accumulation and publication of data relating to losses from various pest sources.

Further stimulus has been provided this committee by the Rockefeller Foundation which recently granted \$9,500 for continuation of the committee's work.

### Lower 'Hopper Infestation Level Is Predicted For Saskatchewan

REGINA, SASKATCHEWAN—The area of grasshopper infestation for Saskatchewan in 1960 is expected to be about the same as that announced for 1958, but the level of infestation within the outbreak borders is expected to be lower, reported R. E. McKenzie, director, plant industry branch, Saskatchewan Department of Agriculture.

"The preliminary grasshopper forecast is based mainly on surveys of adult grasshopper population conducted earlier this fall," Mr. McKenzie said.

"There is reason to believe that early spring tillage of egg-infested stubble fields, together with a vigorous chemical control program kept the damage to a low level this past year," he said.

#### NEW OFFICE LOCATION

CLEVELAND, OHIO—The Cleveland sales office of Dow Chemical Co. has occupied new quarters on the 18th floor of the recently completed Illuminating Building, 55 Public Square. The office services markets for the company's major product lines including agricultural chemicals in northern and central Ohio.

## MOUSICIDE

MADISON, WIS.—Fruit specialists at the University of Wisconsin have come up with a novel use for chemical weed killers. They find the materials help prevent injury caused by mice in apple orchards.

Weed killers can do this by removing protective grass and weed cover around the base of the trees, explain researchers L. G. Holm, F. A. Gilbert and Ernest Haltvick.

This grass under the trees cannot be controlled with machinery, and it provides a haven for mice during the winter. These mice often chew the bark from the tree, thus killing it or injuring it severely.

Ten pounds per acre of monuron or diuron weed killers gave complete control of all vegetation under adult trees during five years of study. The control lasts for two to three years.

The weed killer did not injure the trees, the research men say. That's because these chemicals do not move downward in the soil very much, and most of the tree's feeder roots are outside of the area to which the weed killer is applied. Also, an adult tree is probably much more resistant to the chemical than grasses and weeds.

The applications were made in late April, and the grass had been killed by fall. At that time, the dead grass was easy to rake away from the tree.

This treatment will not substitute for conventional mouse control programs such as baiting, the researchers warn. However, it should reduce mouse damage because the animals normally won't cross a bare area to feed.

### Chippewa Plastics Buys California Facility

CHIPPEWA FALLS, WIS.—The Salinas, Cal., facilities of Package Containers, Inc. have been purchased by Chippewa Plastics Co., a division of The Rexall Drug & Chemical Co., Donald R. Williams, president, has announced.

The West Coast plant will become Chippewa's flexible packaging division, Mr. Williams said. Key men in the operation will be Paul L. Florence, plant manager, and John F. Pandolfo, division sales manager.

## USDA Announces Acreage Allotments

WASHINGTON—The U.S. Department of Agriculture has announced state acreage allotments for the 1960 crop of upland cotton as follows:

State	Total allotments available for distribution in states
Alabama	989,046
Arizona	320,419
Arkansas	1,345,270
California	728,202
Florida	37,518
Georgia	859,927
Illinois	3,142
Kansas	26
Kentucky	7,634
Louisiana	574,980
Maryland	15
Mississippi	1,576,254
Missouri	357,495
Nevada	3,343
New Mexico	149,013
North Carolina	474,715
Oklahoma	775,224
South Carolina	701,409
Tennessee	550,745
Texas	6,817,477
Virginia	17,936
U. S.	16,310,000

### Foresters Told of Fertilizer Potentials

SAN FRANCISCO—H. A. Fowells, of the U.S. Forest Service, Washington, D.C., told some 1,000 foresters in San Francisco recently that "there is evidence that under some conditions forest trees will respond to an increased supply of nutrients."

Mr. Fowells said that too little is known at the present time about the nutrient requirements of most forest trees in order to be able to write prescriptions for forest fertilization practices. Nevertheless, he added, studies are now being made with loblolly pine, a southern timber tree, which give evidence that under proper conditions forest trees will respond to fertilization.

### Arizona Fertilizer Conference Planned

TUCSON, ARIZ.—The third annual Arizona Fertilizer Conference will be held Jan. 20-21 on the University of Arizona Campus, Tucson. Sponsors include the University of Arizona with cooperation of soil improvement committee, Arizona Agricultural Chemicals Assn., and the National Plant Food Institute.

Soil testing is the best guide to a proper soil fertility program and since it is a relatively new practice for Alabama farmers, the agricultural extension service of Auburn University under the leadership of Mr. Lowery launched an Intensified Soil Fertility Campaign in 1959.

The campaign depended to a great extent upon the publicity and promotional efforts of a large number of persons. Assisting in this effort were the Alabama Soil Fertility Society, American Potash Institute and the National Plant Food Institute.

The degree of the stepped-up Soil Fertility educational and publicity efforts during the period of Jan. 1-June 15, 1959, is described by the following figures, furnished by Mr. Lowery and his co-workers:

- 36 Leader meetings with 500 attending.
- 20 "Kick-Off" meetings attended by 1,136 community business and farm leaders.
- 15 Special editions of county newspapers.
- 1,162 Soil fertility articles in local papers.
- 299 Advertisements by local business firms promoting soil testing and improved soil fertility.
- 59 County agents used rubber stamp slogan, "Have You Had Your Soil Tested?" It was imprinted on 240,441 pieces of mail. No record was kept of other offices using it.
- 327 Radio programs on soil fertility and soil testing.
- 234 Exhibits on soil fertility and soil testing.
- 150 Circular letters with 95,859 copies on these subjects.

The results: 18,942 soil samples processed by the agricultural experiment station soil testing laboratory. This was twice as many samples as were processed in 1958, according to Dr. R. D. Rouse, head of the soil testing laboratory.

The soil fertility program for next year is already underway and every indication is that there will be many more farmers happy with their increased profits from soil testing in 1960.



T. F. Willers

F. L. Bryant

C. Y. Cain

R. E. Noble

### Realignment of Duties Announced by Hooker

NIAGARA FALLS, N.Y.—Re-aligned and expanded duties for five executives of Hooker Chemical Corp. have been announced by Thomas E. Moffitt, president. The appointments were to become effective on Dec. 1, he said.



John S. Coey

The five men involved include Thomas F. Willers, F. Leonard Bryant, John S. Coey, Robert E. Noble and Charles Y. Cain.

Under the new setup, Mr. Willers will be responsible for the Easter Chemical, Phosphorus and Durez Plastics divisions as well as for corporate engineering. Mr.

Bryant will be in corporate research, marketing and general development. Mr. Coey succeeds Mr. Willers as general manager of the Eastern Chemical division. Mr. Willers, Mr. Bryant and Mr. Coey are vice presidents of Hooker.

Mr. Noble succeeds Mr. Bryant as general manager of the Phosphorus division and Mr. Cain succeeds Mr. Coey as sales manager, Eastern Chemical division.

#### NET EARNINGS

NEW YORK—Commercial Solvents Corp. reports, for the quarter ended Sept. 30, 1959, consolidated net earnings of \$917,749, equal to 33¢ per share on 2,741,422 shares of common stock. Sales for the quarter were \$19,348,071. Consolidated net earnings for the nine months ended Sept. 30, 1959, were \$2,285,061, equal to 83¢ per share. Sales for the nine months were \$51,822,428.



## Problems in Control of Face Fly, Weeds, Other Pests, Topics at Michigan Meeting

EAST LANSING, MICH.—Control of the farm fly, quackgrass and other weeds, and insects infesting Christmas tree plantations, was discussed at the Michigan Agricultural Pesticide Conference this month at Michigan State University.

More than 140 pesticide people from Michigan and surrounding states met at the M.S.U. Kellogg Center for the event, sponsored by the Michigan Agricultural Pesticide Assn. in cooperation with the department of entomology and department of botany and plant pathology of the M.S.U. College of Science and Arts.

Arthur Wells, of the M.S.U. department of entomology, pointed out that although there are more than 40 species of flies found in barns and around livestock, present insecticides are used against three main species: the house fly, stable fly and horn fly.

But now, he warned, the face fly is an additional one with which to contend.

Mr. Wells explained that this pest first appeared in Michigan during the past summer, and may constitute the primary fly problem to livestock raisers in 1960. Prior to this summer, it was known only in New York, Maine and Virginia, although now it has been reported and verified from 15 states from the Great Lakes area eastward, he said.

The face fly, common in Russia, China and the Middle East, gets its name from its habit of accumulating on the faces of cattle, under and around the eyes, in and around the nostrils and at the lips, he said. They feed on the mucous secretions around these openings, and also on blood from insect bites and other wounds, he added.

Mr. Wells explained that the face fly cannot pierce the skin since the insect's mouthparts are similar to those of the housefly. Although they are found primarily on cattle, he said, they will also attack horses and sheep.

This habit of hanging on the faces of livestock not only annoys the animal, but also presents a possibility of aggravating or spreading eye diseases, he told the conference. An abundance of these flies may interfere with livestock feeding and thus could affect milk production of dairy cows or weight loss in beef cattle, he declared.

The habits of this new fly, Mr. Wells reminded, make it unusually difficult to control. Its presence on the animals automatically limits the insecticides which can be used and its being on the face is going to affect the method of application, he warned. At present, there is no known control method, he said.

In discussing methods of controlling flies, Mr. Wells pointed out that residual sprays on the walls and ceilings of dairy barns have been effective for a number of years. He predicts, however, that there will probably be a trend toward the use of

more space sprays in the near future for two main reasons:

1. Cultural practices employed on dairy farms have been steadily changing. The use of pen-type barns, grass silage especially in trench silos, and also chopped hay when fed in self-feeders present problems in sanitation. With all of these new conveniences, the proportion of fly breeding area to surface area where residual sprays could be effectively used, is greater than in the conventional stanchion-type barn.

2. There is a strong indication that flies are becoming resistant to the phosphates which have been used, as for example: where around 4 weeks of control was formerly realized with a 1% residual spray, we now get around 10 days.

The synergized pyrethrins used either alone or in combination with a repellent will still give good fly control as space sprays, Mr. Wells reported. There is no residue problem involved with these materials, he said, and they are safe to use even directly on animals when applied with care.

Dr. Stanley K. Ries, of the M.S.U. department of horticulture, reminded the conference that quackgrass, that "ole debbil" weed which presents perennial problems to the grower, can now be effectively controlled. By the proper use of herbicides and tillage, quackgrass can be controlled for about \$15 an acre without losing the use of the land, he said.

Horticulturists can also look forward to herbicides which will control weeds from planting time until harvest, he pointed out.

"The trend in weed control research is now toward the use of herbicides which can be applied at planting time or on clean cultivated areas around perennial crops," Dr. Ries pointed out. "These chemicals control the first crop of germinating weed seeds and have a residual toxicity for weed seedlings so that no hand weeding or hoeing is necessary," he said.

Growers today, he explained, should be able to do a better job of controlling weeds because of these factors:

- 1) New chemicals which are more selective for crops, and more effective weed killers.
- 2) Better sprays for old chemicals.
- 3) Better spray equipment and methods of application.
- 4) Experience gained with previous use.

The last factor may be the most important, he stressed, because effective weed control may depend on many factors such as soil moisture, time of application, species of weeds or soil type. The observant grower, he maintained, should become more adept at controlling weeds on his farm and under his conditions than any weed control specialist not familiar with his conditions.

Dr. James W. Butcher, of the M.S.U. department of entomology, described experiments carried out in the spring of 1959 for control of eastern spruce gall aphid on Norway and white spruce. He revealed that each of three applications made weekly over a 3-week period gave good control.

### Two Salesmen Added to West Virginia Staff

NEW ORLEANS—West Virginia Pulp & Paper Co. has added Richard W. Britt to its Middle Atlantic district, according to an announcement by Jason M. Elsas, regional manager. The appointment of Lewis E. Walton as sales representative for the Western district was also announced. He will replace Richard Allen, recently promoted to the sales staff of the company's new box plant in Phoenix, Ariz.

### SNAKECIDE NEEDED

BIG SPRING, TEXAS—Rattlesnakes have slithered in to grab the spotlight away from bollworms and cabbage loopers in West Texas, and to gain the distinction of being the most unpopular critter in these parts.

Never in the memory of the oldest old-timers have the snakes been so numerous as this past summer. Snakes crawling into people's yards and under the houses became so commonplace that local newspapers stopped printing stories about it.

On one stretch of highway west of Big Spring, hunters killed dozens of small rattlers at night by hunting them with a spotlight. After darkness the serpents would crawl upon the pavement to soak up its warmth.

Near Uvalde, Texas, one couple killed 60 snakes during a two weeks period, all of which were found on the highway. Another resident in the area, Dub McFatter, killed over 200.

Several police officers warned people about getting out of their cars at night while out in the country. Although the snakes don't eat cotton or maize, they have discouraged lots of cotton pickers. After finding three rattlesnakes one morning, one crew of 30 pickers picked up their sacks and quit.

One story coming out of the Quemado Valley on the Rio Grande River says the rattlesnakes were so thick they clogged up the mechanical pickers.

Wildlife experts say the increase in snakes is due to wet years and a teeming population of rabbits, rats and mice. Also most pastures are posted against hunters so the snakes have been unmolested in raising large, well-fed families.

### H. W. Hamilton Awarded Association Honor

NEW YORK—Herbert W. Hamilton, for many years secretary of the Chemical Specialties Manufacturers Assn., has been selected to receive the 1959 Achievement Award of CSMA. He was chosen to be the seventh recipient of the honor, which is presented annually for "outstanding contributions in the field of chemical specialties."

H. W. Hamilton

Mr. Hamilton has been secretary of CSMA for nearly 20 years, initially on a voluntary basis. Since 1950 he has been employed by the association as general manager and secretary. The CSMA presently has over 400 members. In 1928 and 1929, Mr. Hamilton was president of CSMA, then known as the National Association of Insecticide & Disinfectant Manufacturers. He served for several years on the board of governors before and after his term as president. For several years before becoming secretary he was chairman of an executive office committee.

### COTTON MEETING PLANNED

MEMPHIS, TENN.—The National Cotton Council of America will conduct its 22nd annual meeting Feb. 8-9 at the Statler-Hilton Hotel, Dallas, Texas, the council has announced. Approximately a thousand cotton industry leaders are expected to be on hand.

### New Edition of Western Handbook Under Way

SAN FRANCISCO—The Soil Improvement Committee of the California Fertilizer Assn. is in the process of writing a revised edition of the Western Fertilizer Handbook, first issued in 1953.

The new handbook, the third edition, is expected to be published sometime during 1960, and is being reissued in part to meet the demand for the publication and to bring it up to date. The 1953 edition published 15,000 copies, and a second edition of 10,000 was brought out the following year. Both editions have now been exhausted.

The 1960 revision is expected to publish another 15,000 copies. It is being prepared under the supervision of Millard McCollam, American Potash Institute, San Jose, chairman of the soil improvement committee, and Earle J. Shaw, Chilean Nitrate Sales Co., San Marino, chairman of the Handbook subcommittee of the SIC.

The new handbook will contain 11 chapters covering such topics as western agriculture and attitudes, soil and water, plant nutrition, fertilizer materials, soil and tissue analysis, methods of application, fertilizer law, and others. About ten or more full color plates will also be published.

The handbook will be sold at one dollar a copy, and orders or inquiries can be taken by Sidney H. Bierly, general manager of the California Fertilizer Assn., 719 K. St., Sacramento, Cal.



You give food and friendship with every \$1 package you send to the world's hungry thru the CARE Food Crusade, New York



Carl E. Reger

Sam H. Vaughn

Dr. J. M. Bellows

### Florida Fertilizer Firm Elects 3 New Officers

MIAMI, FLA.—Hector Supply Co., fertilizer manufacturer, has announced the election of three new officers in the firm. Carl E. Reger was named executive vice president, Dr. J. M. Bellows general manager of the fertilizer and chemical division and Sam H. Vaughn, purchasing and

production manager for the company's plants and farm supply operations.

According to Robert C. Hector, president, who made the announcement, all of the new appointees are well known in the trade. The company has been serving the farm trade in South Florida since 1912 and has operated its own fertilizer plants for more than 20 years.



## CSMA to Limit Meeting Registration

NEW YORK—The Chemical Specialties Manufacturers Assn. has moved to limit attendance at midyear and annual meetings. Its board of governors voted that representatives of non-member companies may now attend only as prospective members on invitation of the association's president. Heretofore, attendance has been open to all who wished to register.

Recommendations for invitations to non-member companies will be made through the chairmen of the executive boards of the association's six divisions, or the chairman of the general membership committee. Each company receiving such an invitation may send representatives who will be allowed to register at the meeting.

The new policy is effective with the 46th annual meeting to be held at the Mayflower Hotel, Washington, D.C., Dec. 7-9, 1959.

## Ogden Feed, Fertilizer Firm Sold for \$290,000

OGDEN, UTAH — A cattle feed mixing and a feed pelletizing plant, along with a fertilizer plant, were included in the \$290,000 sale of the Western Livestock Order Buyers 78-acre feed lot west of here.

The transaction was confirmed recently by W. M. Early, general manager of the cattle division of the Beryl Investment Co., Somis, Cal. The plants and lot will be operated by Ogden Commercial Feed Yard, Inc., a subsidiary of the Beryl Wood Co.

The facilities are temporarily closed for remodeling and expansion, according to Mr. Early.

## New Mexico Agricultural Conference Set for Jan. 13

UNIVERSITY PARK, N.M. — The third annual Agricultural Chemical Conference will be held Jan. 13 at New Mexico State University, Dr. J. Gordon Watts, head of the department of botany and entomology, has announced.

Results of research on insecticides, nematocides, fungicides, herbicides, and fertilizers will be the general subjects of the conference.

A new feature of the program will be the teaming up of representatives of industries with staff members of the botany and entomology and agronomy departments of the NMSU Agricultural Experiment Station in presenting the subjects.

Frank Irons, principal agricultural engineer with the USDA Agricultural Research Service at Wooster, Ohio, will be the guest speaker. His subject will be ground and air application of pesticides. Mr. Irons has been working on development of pesticide application machinery for some years.

## Monsanto Acquires Options On 650 New Jersey Acres

NEW YORK—Monsanto Chemical Co. has acquired options on more than 650 acres of potential industrial property in Gloucester County, N.J., Victor E. Williams, Monsanto regional vice president, announced.

Mr. Williams said six tracts were involved in the property which includes more than a mile of New Jersey shore line on the Delaware River. The site is in Logan Township, across the river from Chester, Pa.

"Monsanto is not prepared to disclose its plans for this site at this time," Mr. Williams said. "It is hoped however that rail access to the property and other local considerations can be worked out at an early date."

### PLANS FERTILIZER PLANT

WAUCHULA, FLA. — A contract has been let for the construction of a \$90,000 Florida Fertilizer Co. plant to be built here. Work will be started immediately, company officials said.

## RAT WAR DECLARED

MATHIS, TEXAS—An all-out battle against rats has been declared by San Patricio County farmers. The campaign, expected to last two weeks, is being sponsored by the 4-H Club boys, who will cooperate with the extension service, USDA Fish and Wildlife Service and the county's extension program building committee.

The 4-H Clubs will make rat bait available. Bait stations will be in operation in seven communities.

The rat population has been exceptionally large the last two or three years, and it is hoped the campaign can win a decisive victory over the field pests.

## Air Operators' Conference Program Completed

FRESNO, CAL.—Drift and how to avoid it will be a leading subject for discussion at the Tenth Annual convention of the Agricultural Aircraft Assn., Inc., scheduled to be held at the El Mirador Hotel, Palm Springs, Cal., next Jan. 13 through 16.

Dr. Ralph Fogelman, an expert on drift and resulting damage, will discuss the subject during the afternoon sessions on Jan. 15, followed by Robert Z. Rollins, chief of the bureau of chemistry of the California State Department of Agriculture, who will talk on the same subject.

Other discussions that day will feature Claude Finnell, Imperial County Agricultural Commissioner, host county to the airmen, and Lloyd Nolan, agricultural operator. Mr. Nolan's talk is billed as telling the aircraft operators how to spread chem-

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icals and make more profit while doing it.

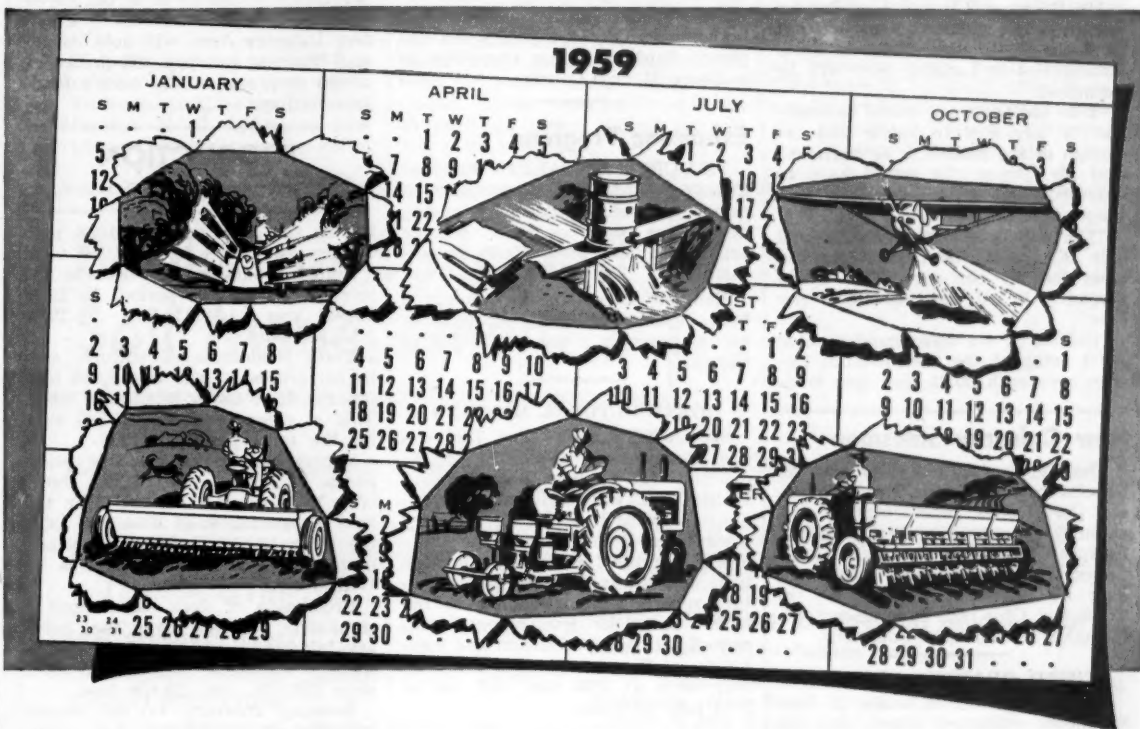
New officers and directors will be elected at a business meeting scheduled for the morning of the 16th.

## New Mexico Cotton Hit by Rust Fungus

UNIVERSITY PARK, N.M.—Cotton rust has caused considerable damage to the cotton crops in three Hidalgo County areas, Ed Hitson, county agent, reports.

He said cotton farmers in the Rodeo, N.M., area, west of Lordsburg, estimated the loss from the fungus disease at 50%. Farmers in the Cotton City and Animas areas estimated losses at 25 to 30%.

The rust caused premature defoliation and poor development of the bolls. The rust spores are blown from grama grass on to the cotton plants.



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## Michigan Counties Complete Aerial War On Japanese Beetles; Residents Complain

DETROIT, MICH.—The state has completed its "beetle bombing" aerial spray operation in Detroit and Wayne County, and has moved into the southern end of Monroe County near the Ohio border.

C. A. Boyer, chief of the division of plant industry for the state department of agriculture, said the operation was completed here Nov. 12 without a single substantiated complaint of danger to birds.

When the old World War II bombers first began dropping the pelleted insecticide aimed at elimination of Japanese beetle larvae, area police and state agencies' switchboards were lighted up with frightened and irate residents' calls.

Complaints that birds were being killed were among the calls received, but only three sparrow bodies were actually obtained as the result of the calls.

Mr. Boyer said it is not yet known how the three sparrows died, but that as soon as they are sent to state laboratories in Lansing they will be examined.

"I do not believe it would be possible for any bird to locate and eat enough of the pellets to be harmed," said Mr. Boyer. "It would have to practically gorge itself on a pile of the insecticide pellets."

"The pellets are mostly clay, and only 20 lb. of them were sprayed from the air per acre. This would spread 2 lb. of the insecticide per acre."

"Curiously, we have hand treated 1,200 acres of the metropolitan Detroit area with 30 lb. per acre since

last July, and have yet to receive any complaint. The hand-treated areas included Warren, the Grosse Pointe, River Rouge and several other smaller suburban areas.

"There is no doubt that the low-flying planes frightened flocks of birds away for short periods, but we have yet to find a single case of bird poisoning in the entire state. We have been spraying various kinds of insecticide in this manner since 1950."

The same insecticide used in the Detroit area was spread on 4,800 acres in Berrien County earlier in the year, he said, and no one has yet found a poisoned bird.

The Japanese beetle insecticide being used now is one with a delayed action that dissolves into the earth almost instantaneously. When the beetle grubs become active in the spring, it will kill them before they can damage vegetation, he said.

The "beetle bombing" operation will be completed for the year when the planes finish up three townships in southern Monroe County.

### Expansion Program

TILBURY, ONTARIO—Rainbow Chemicals Ltd., Tilbury, announces a major expansion program involving new office facilities, new storage tanks and improved plant process facilities.

Rainbow Chemicals is primarily a bulk liquid fertilizer manufacturer and is the only plant of its kind in Canada.

### HORTICULTURAL MEETING

SALISBURY, MD.—The 73rd annual Peninsula Horticultural Society meeting will be held Dec. 8 and 9 in the Elks' Hall, Salisbury, according to Edward H. Schabinger, county agricultural agent. He said this year's meeting of the Delmarva Peninsula's fruit and vegetable growers will feature reports from specialists on the latest research developments concerned with the production and marketing of these crops. The meetings will begin at 9:30 a.m. and end at 3:30 p.m. each day.

### ENTOMOLOGICAL MEETING

ATHENS, GA.—The 24th annual meeting of the Georgia Entomological Society will be held March 30-31, 1960, at the New Science Center, University of Georgia in Athens, announced R. L. Robertson, extension entomologist and publicity chairman.

## Minnesota Short Course Program Announced

ST. PAUL, MINN.—Program plans were announced for the ninth annual Soils and Fertilizer Short Course sponsored by the University of Minnesota. The meeting will be held at Coffey Hall Auditorium on the university's Institute of Agriculture campus here, Dec. 7-8.

Included in the plans will be discussions on:

- "Soil Testing, State and Private Laboratories."
- "Potatoes and Wheat in the Red River Valley."
- "Drouth."
- "Radioactive Fallout."
- "Non-water Soluble Potassium."
- "Nitrate Poisoning Hazards and Nitrogen Recommendations."
- "Root Development Related to Fertilizer Placement."

The dinner speaker will be Dr. W. P. Martin, head of the University's soils department, who will discuss "Fertilizer Problems in Israel."

On Dec. 8, the Minnesota Fertilizer Industry Assn. will hold its annual business meeting and present a varied program on the state's fertilizer business.

## PRODUCTION

(Continued from page 1)

During the same period of 1958, production amounted to 1,022,959 tons.

Potash production also was on the increase during the period. In 1959, output was 1,449,811 tons. In 1958, 1,348,295 tons.

Total production of sulfuric acid by all processes was 10,459,486 tons for the first seven months of 1959. This is compared to 9,015,585 tons for the same period of 1958.

Superphosphate and other phosphatic fertilizers (100%  $P_2O_5$ ) showed a considerable increase over the first seven months of 1958. For 1959, the figure was 1,584,818. Last year's output for the same period was 1,470,033 tons.

Production of urea experienced a significant increase over the January-July period of 1959, also. The respective tonnages for 1959 and 1958, were 359,258 and 295,588 tons.

Running contrary to the overall increases in production, was sulfur which saw a slight decrease in production. Output during the January-July period of 1959 was 2,860,151 long tons. For the same period last year, the output was 3,215,187 long tons.

The only pesticide listed in the Commerce production report was for DDT, which saw a significant increase in its production during the January-July period this year. The report says output of 100% product during that time was 45,965 tons. During the same period of 1958, it was 40,776 tons.

Along with increased domestic production of nearly all fertilizer items, imports were also on the increase. Imports of ammonium nitrate, fertilizer grade, rose from 178,079 tons in the January-July period of 1958, to 208,341 tons in that period of this year.

Fertilizer grade ammonium phosphates imports for the seven month period of 1959 was 24,132 tons, whereas in 1958 it was 22,033 tons.

Export figures on many items were likewise on the increase. Outshipments of ammonia, anhydrous and aqua, advanced to 42,937 tons in 1959 from 38,141 tons last year.

Pesticidal products increasing their export tonnages during the first seven months of this year included benzene hexachloride, DDT, fungicides, and technical organic phosphate insecticides.

Pesticides exported in lesser quantities in the first seven months of 1959 included 2,4-D and 2,4,5-T.

Exports of potash, crude sulfur and superphosphate, were also less during the 1959 period.

## 12 Counties Join Alabama Campaign

ATLANTA, GA.—Twelve additional counties will join the Alabama Soil Fertility Campaign in 1960. Lauderdale and Limestone counties have already "kicked-off" their soil testing promotional efforts, reports Dr. S. L. Tisdale, southeastern regional director of the National Plant Food Institute.

Franklin, Lemar, Fayette, Calhoun, Lee, Elmore and Conecuh counties are making plans to launch their programs in the near future. These county programs, under the direction of the county agent, include plans to publicize and promote soil testing as the first step to improve soil fertility, according to J. C. Lowery, Auburn University extension agronomist. Higher soil fertility means greater profits from farm crops when coupled with other recommended crop production practices.

Other Alabama counties will continue efforts started last year to improve soil fertility of their crop and pasture land. Some of these counties that have already started their plans for 1960 are Shelby, Dekalb, Tuscaloosa, Pickens, Escambia, Monroe, Houston and Cherokee. These counties plan to continue to enlist aid from all segments of their business organizations in publicizing the benefits to be derived from adopting improved crop production practices—mainly increased profits. Soil testing clinics, special newspaper editions and radio programs, community meetings, direct mailing programs and many other methods will be used again to promote soil testing and better crop production practices.

This soil fertility program is under the direction of Mr. Lowery who is being assisted by the Alabama Soil Fertility Society, American Potash Institute and NPFI.

## Raymond Bag Announces Sales Personnel Changes

MIDDLETOWN, OHIO—D. F. Wicks, general sales manager of Raymond Bag Corp., Middletown, Ohio, a division of Albemarle Paper Mfg. Co., has announced the following changes in Raymond's sales organization:

C. R. Keener has been appointed salesman in the central district, with headquarters in Louisville, Ky. Mr. Keener, whose home is in Middletown, Ohio, is representative in the southern Ohio, southern Indiana, and northern Kentucky area.

Ralph T. Rose recently joined Raymond as salesman in the midwestern district. With headquarters in Chicago he will represent Raymond in the Chicago and Wisconsin area.

George Clifton, formerly of Richmond, Va., has been appointed salesman in the midwestern district of Michigan and northern Indiana. His headquarters are in Detroit, Mich.

### ASS'T DIRECTOR OF PURCHASES

NEW YORK—A. M. Eggeman has joined Witco Chemical Co., Inc., as assistant director of purchases. Mr. Eggeman's previous experience in purchasing includes 13 years with Rexall Drug Co. He is a graduate of Washington University, is currently serving as second vice chairman of the Chemical Buyers Group of the National Association of Purchasing Agents, and is a member of the St. Louis Purchasing Agents Assn. and several St. Louis chemical associations.

### NEW FIRM INCORPORATED

ALBUQUERQUE, N.M.—Articles of incorporation have been filed for New Mexico Feed & Fertilizer Co., 1200 Simms Building, to manufacture and sell feed and fertilizer, listing \$250,000 capitalization and these incorporators: Arthur, Louis and Ira Ravel.



Roy A. Parker

Joseph G. Longstreth

John A. Putnam

## USI Names Three to New Sales Positions

NEW YORK—U. S. Industrial Chemicals Co., division of National Distillers and Chemical Corp., has announced three appointments through Alden R. Ludlow, Jr., vice president, sales. Roy A. Parker has been named Kansas City sales division manager; Joseph G. Longstreth manager of the St. Louis, Mo., sales office and John A. Putnam, manager of the USI Atlanta office.

Mr. Parker has been with USI for the past 33 years and was formerly manager of the firm's Kansas City sales office.

Mr. Longstreth has been a sales representative for the company in the St. Louis area since he joined USI in 1955.

Mr. Putnam has been a salesman operating out of the company's New Orleans sales division since 1952 and has been located in Atlanta, Ga., for the past two years.





Archy S. Booker, Jr.

## Archy S. Booker Joins Croplife Staff

MINNEAPOLIS, MINN.—Archy S. Booker, Jr., has been named to the Croplife advertising sales staff, announced W. E. Lingren, executive vice president and advertising director of the Miller Publishing Co. Mr. Booker will represent Croplife out of the company's New York office.

Mr. Booker was formerly director of advertising for Hoard's Dairyman and represented Hoard's for the past 23 years in the East and Southeast.

In his new assignment, Mr. Booker will also handle advertising sales in the East for Farm Store Merchandising, an affiliated publication.

In other company assignments, Mr. Lingren said Paul L. Dittmore, manager of the New York office, will be in charge of advertising sales for all Miller publications in the East, but will work primarily on The Northwestern Miller, Milling Production, The American Baker, Feedstuffs and Feedlot.

James W. Miller also represents Feedstuffs and Feedlot in New York.

In the Central States area, advertising sales for The Northwestern Miller, Milling Production and The American Baker have been transferred to Don E. Rogers, manager of the Chicago office. Mr. Rogers will supervise advertising sales for all Miller publications in that area and will continue to work directly with Feedstuffs and Feedlot.

Robert S. Harrison will join the Chicago staff as an advertising representative for Feedstuffs and Feedlot. Mr. Harrison formerly was advertising sales manager of Hatchery and Feed published by Watt Publishing Co., Mt. Morris, Ill. In addition, he was responsible for advertising sales for all Watt publications in the Illinois and Iowa area. Prior to joining Watt in 1952, Mr. Harrison represented Successful Farming in New York. He also had earlier experience with Westinghouse Electric Co. and Armour & Co. in the field of advertising and public relations.

Amos Standish is the Chicago advertising sales representative for Farm Store Merchandising and Croplife.

Martin E. Newell, with headquarters in Kansas City, will continue in charge of advertising sales for all Miller publications including Professional Nursing Home, newest publication of The Miller Publishing Co., in the South and Southwest. He will be assisted by Thomas E. Letch.

Frank Wenter & Co., 11681 San Vicente Blvd., Los Angeles, has been appointed publisher's representative for Feedstuffs, Feedlot, Croplife, Farm Store Merchandising and Professional Nursing Home in the Pacific Coast states.

Mr. Wenter has a 24-year background in the field of business publications. He is a former vice president in charge of advertising for the

Clissold Publishing Co. He has had additional publishing experience with Triangle Publications and with the American Medical Assn.

Paul A. Anderson is the national advertising sales manager for Farm Store Merchandising and the regional representative for Feedstuffs and Croplife.

George W. Potts will take over as advertising sales manager of The Northwestern Miller, Milling Production and The American Baker. Mr. Potts formerly represented the firm's milling publications in New York. He has been transferred to company headquarters in Minneapolis.

Publisher's representatives in New York and Chicago have been appointed for Professional Nursing Home, a monthly magazine for administrators of nursing homes and homes for the aging.

Austin LeStrange Co., Inc., will represent the magazine in the East. Advertising sales representatives for Professional Nursing Home will be Austin LeStrange, Austin LeStrange, Jr., Paul Thornton and Harold Cannon.

H. G. LeStrange Co., Inc., 185 No. Wabash Ave. in Chicago, will represent Professional Nursing Home in the Midwest. H. G. LeStrange and John Lennon are the representatives

who will handle advertising sales for PNH.

Upper Midwest advertising sales for PNH will be handled by Jack Mertes, advertising sales manager, from the firm's home office in Minneapolis.

## To Assistant's Post

NORFOLK, VA.—Carl G. Prendergast has been appointed assistant general traffic manager for the Smith-Douglass Co., announced J. A. Monroe, operations vice president. Smith-Douglass general traffic manager is Robert V. Peabody.

Prior to joining Smith-Douglass in 1957, Mr. Prendergast was employed in the Virginian Railway traffic department.

## ENTOMOLOGIST HONORED

MANHATTAN, KANSAS—Reginald H. Painter, Kansas State University professor of entomology, received the 1959 Gamma Sigma Delta national award for distinguished service to agriculture at a dinner in his honor in Manhattan Nov. 11. The national honor society of agriculture cited Mr. Painter as an outstanding teacher, leader, researcher and an authority on insect control through host plant resistance.

## California Cotton

SACRAMENTO, CAL.—Estimated 1959 cotton production for California is 1,950,000 bales as of Oct. 1, and 30,000 bales under the estimate for Sept. 1, according to the California Crop and Livestock Reporting Service at the California Department of Agriculture.

In 1958, 1,604,000 bales were produced, and the 1948-57 average is 1,424,000 bales. The record high production mark was 1,818,000 bales in 1952. This year's large production is the result of excellent yield prospects and a 20% increase in the acreage compared with a year ago.

The estimated average yield is 1,070 lb. per acre, a record high mark for California, and comparable with 1,049 lb. last year. The ten-year average is 748 lb. The 875,000 acres for harvest compares with 732,000 acres harvested last year. The 10-year average is 943,000 acres.

## WACA TO MEET

SACRAMENTO, CAL.—The spring meeting of Western Agricultural Chemicals Association will be held at Miramar Hotel, Santa Barbara, California, March 22-23, 1960, it was announced by C. O. Barnard, executive secretary. Program plans will be announced later, he said.

# Books on Soils and Soil Management

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A concise textbook dealing with basic concepts of soils. Much useful information for students in agriculture, farmers, fertilizer salesmen, etc. 68 pages, paper bound ..... \$1.00

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## Where Do They Go From Here?

### Cranberry Debacle Seen as Door Opener to Additional Attacks on Pesticide Chemicals

**N**EW PROBLEMS by the dozens are no doubt in store for food growers and processors, as well as for the pesticidal industry in the wake of the tremendous turmoil erupting out of the cranberry situation. Despite the fact that the culprit in this case is misuse of a fine herbicide rather than an indictment against the material itself, it is considered probable that the current episode will open the floodgates to additional trouble and tumult for the pesticide industry.

The present situation has afforded a field day for the faddists and every pesticide foe in the country to be heard, and there is no doubt that they have made the most of it. One has only to read the commentaries in most newspapers and to give ear and eye to radio and television stories.

We don't know how many times we've heard someone say "there oughta be a law . . ." nor do we know on how many occasions we have explained that there ARE laws and that no pesticidal product can be registered and offered for sale without meeting every requirement of these laws.

Which brings up another inevitable thought: Might the current pressure on the U.S. Department of Agriculture bring about a revision of its policies of accepting for registration any pesticide thought to be capable of producing cancer? It is unlikely that USDA has ever been involved in such a fierce public furore before and it is thus difficult to foresee exactly what the final reaction might be.

Taking the matter a little further, what might be done in the matter of labeling to assure a skeptical public that the grower is actually abiding by the directions on the container? Will additional "policing" become necessary in the eyes of USDA or the Food and Drug Administration?

The spectre of the Delaney amendment hangs heavily over the whole procedure. Officials in Washington have indicated that it would be practically impossible to enforce every implication of the rule that no trace of any carcinogen can be permitted in any food.

What have been some of the reactions throughout the country since the cranberry scare first hit the newspapers and other news media?

Needless to say, the situation has been anything but quiet. In Massachusetts, largest of the cranberry-growing regions of the U.S., accounting for about 48% of the total crop, spokesmen from the agricultural experiment station explained that New England cranberry consumers had nothing to worry about. He pointed out that a special chemical laboratory had been set up in the Cape Cod area to guard against contamination by testing the berries before they were processed. The spokesman, Dr. Chester E. Cross of the University of Massachusetts, declared that "the timing of this announcement is regrettable . . . We have been using aminotriazole since 1955. It is a wonderful weed killer and a boon to the industry. It is too bad it is getting a bad name now."

Another well-known spokesman, Dr. John H. Lilly, head of the department of entomology and plant pathology at the University of Massachusetts, said that the U.S. Department of Health, Education and Welfare was amply equipped to halt the movement of contaminated berries at the source. "They knew about it months in advance," Dr. Lilly said. "They're supposed to stop these

things at their source. They have been doing it with other crops for years . . ."

The Massachusetts entomologist termed the cranberry controversy as "a case where one rotten apple spoils a whole barrel." There was no need for the head of the Department of Health, Education and Welfare to condemn the entire cranberry crop without exonerating those from Massachusetts where the weed killer had been used according to directions and there was absolutely no residue, Dr. Lilly added.

Possibly no group was more upset, understandably, than was the Massachusetts Farm Bureau Federation, whose executive secretary, Carleton I. Pickett, wired President Eisenhower that if Arthur S. Flemming, Secretary of the Department of Health, Education and Welfare, "has any evidence there is any harmful residue on cranberries, he has known it a long time. His release just prior to Thanksgiving is inept, callous, and harmful to a very important segment of agriculture. He has a duty not to yell fire until he knows there is one."

In New Jersey, where some 8% of the nation's cranberries are grown, Dr. Ordway Starnes, associate director of the New Jersey Agricultural Experiment Station at Rutgers University, said that the current alarm over residues in cranberries will have served a useful purpose if an aroused public pauses to appreciate that the American market basket is filled with the most wholesome food on earth.

"One reason why our food supply is so superior is the availability of safe and effective pesticidal chemicals for controlling insects, diseases and weeds." Pesticides, he went on, are perhaps the most important factor in today's intensive agricultural production. Without them, farmers could not supply consumers with produce of high market quality, free from damage by insects and diseases.

Dr. Starnes declared that without pesticides, "only a small percentage of each year's crop would be worth harvesting, and even that would be damaged to some extent."

"Pesticide residues on food crops were deemed to be of such importance that in 1956 experiment station directors in the 12 northeastern states pooled their research resources for greater efficiency. Since then thousands of analyses of our food crops have been made. These findings form the basis of a program which makes possible the production of inexpensive food free of insects and diseases, free of harmful residues and the most wholesome known to man."

Dr. Theodore R. Flanagan, agronomist in charge of weed control at the Vermont Agricultural Experiment Station, observed that it is "practically impossible for a human to absorb a harmful dose of the herbicide in question short of suicidal attempts."

"One would have to eat between 75 and 100 lbs. of the chemical to do serious damage to himself," Dr. Flanagan said. "One could not eat this much of anything in a short time without serious effects," he went on.

Limitations of space, time, and the reader's patience do not permit much more in the way of a report on the cranberry situation. Shocked industry observers, wondering where the health crusaders may turn next in their condemnation of anything "chemical", are still obeying the spirit and the letter of the law in research, tests, registration procedures and labeling practices. What more can any industry do?



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CROPLIFE is a controlled circulation journal published weekly. Weekly distribution of each issue is made to the fertilizer manufacturers, pesticide formulators and basic chemical manufacturers. In addition, the dealer-distributor-farm adviser segment of the agricultural chemical industry is covered on a regional (crop area) basis with a mailing schedule which covers consecutively, one each week, three geographic regions (South, Midwest and West) of the U.S. On the fourth week, production personnel in fertilizer manufacturing and pesticide formulating plants throughout the U.S. are covered in depth. To those not eligible for this controlled distribution, Croplife's subscription rate is \$5 for one year (\$5 a year outside the U.S.). Single copy price 25¢.

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## MEETING

## MEMOS



Dec. 1—Missouri Fertilizer Sales Clinic, Memorial Student Union, University of Missouri, Columbia, Mo.

Dec. 8-9—73rd Annual Peninsula Horticultural Society meeting, Elks' Hall, Salisbury, Md.

1960

Jan. 13—Georgia Plant Food Educational Society, University of Georgia, Athens, Ga.

Jan. 13-15—Virginia Polytechnic Institute Agronomy Schools: Jan. 13, Culpeper; Jan. 14, Tappahannock; Jan. 15, Gloucester.

Jan. 19-21—Twelfth Annual California Weed Conference, Sacramento, Cal.

Feb. 4—Executive Committee Meeting, National Safety Council, Fertilizer Safety Section, New Florida Hotel, Lakeland, Fla.

Feb. 8-9—Twenty-Second Annual Meeting, National Cotton Council of America, Statler-Hilton Hotel, Dallas, Texas.

March 22-23—Western Agricultural Chemicals Assn., spring meeting, Miramar Hotel, Santa Barbara, Cal.

March 30-31—Twenty-fourth annual meeting, Georgia Entomological Society, New Science Center, University of Georgia, Athens, Ga.

Meeting Memos listed above are being listed in this department this week for the first time.

Nov. 30-Dec. 4—27th Exposition of Chemical Industries, New York Coliseum, New York City.

Nov. 30-Dec. 5—Joint meeting, Entomological Society of Ontario; Entomological Society of Canada and Entomological Society of America, Hotel Sheraton-Cadillac, Detroit, Mich.

Dec. 1-2—Illinois anhydrous ammonia Assn. Meeting, Law Hall, University of Illinois, Urbana, Ill.

Dec. 1-2—Annual meeting, Carolinas-Virginia Pesticide Formulators Assn., Carolina Hotel, Pinehurst, N.C.

Dec. 2-3—Indiana Fertilizer Conference, Memorial Center, Purdue University, Lafayette, Ind.

Dec. 2-3—Annual Missouri Fertilizer Conference, Columbia, Mo.

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Dec. 7—Annual Kansas Fertilizer Conference, Manhattan, Kansas.

Dec. 7-8—Minnesota Soil Short Course, University of Minnesota Institute of Agriculture, St. Paul, Minn.

Dec. 7-9—46th annual meeting, Chemical Specialties Manufacturers Assn., Hotel Mayflower, Washington, D.C.

Dec. 7-10—Central Canada and North Central Weed Control Conferences, Royal Alexandra Hotel, Winnipeg, Manitoba, Can.

Dec. 7-11—Nebraska Fertilizer Institute anhydrous ammonia workshops, Dec. 7, Lincoln, Neb.; Dec. 8, Hastings, Neb.; Dec. 9, Ogallala, Neb.; Dec. 10, Kearney, Neb.; Dec. 11, Columbus, Neb., Agricultural Ammonia Institute cooperating.

Dec. 8—Annual Kansas Fertilizer Dealers Conference, Manhattan, Kansas.

Dec. 8—Minnesota Fertilizer Industry Assn. meeting, University of Minnesota Institute of Agriculture, St. Paul, Minn.

Dec. 8-10—District Fertilizer Dealers and Lime Producers Schools, Dec. 8, Green Bay, Wis., Riverside Ballroom; Dec. 9, Eau Claire, Wis., Eau Claire Hotel, and Dec. 10, Madison, Wis., Wisconsin Center Building, sponsored by the Soils Department, College of Agriculture, University of Wisconsin.

Dec. 9-11—Kansas District Fertilizer Dealer-County Agent Training Schools: Dec. 9, Chanute; Dec. 10, El Dorado, and Dec. 11, Wichita.

Dec. 9-11—International Crop Protection and Pest Control Exhibition, Seymour Hall, St. Marylebone, London, England.

Dec. 10—Iowa Fertilizer Promotion Workshop, Savery Hotel, Des Moines, Iowa.

Dec. 10-11—Michigan State University Fertilizer Conference, Kellogg Center, East Lansing, Mich.

Dec. 10-11—Arkansas Plant Food Conference, Lafayette Hotel, Little Rock, Ark.

Dec. 11—Ohio Fertilizer and Lime Conference, conference theatre, Ohio Union, Ohio State University, Columbus, Ohio.

1960

Jan. 5-6—Annual Texas Fertilizer Conference, College Station, Texas.

Jan. 6-7—Wisconsin Pesticide Conference with Industry, Wisconsin Center Bldg., University of Wisconsin, Madison, Wis.

Jan. 6-8—14th Annual Meeting, Northeastern Weed Control Conference, Hotel New Yorker, New York City.

Jan. 7-8—Colorado Fertilizer Conference, Fort Collins, Colo.

Jan. 7-8—Sixth Annual Mississippi Insect Control Conference, in conjunction with annual meeting of Mississippi Entomological Assn., Mississippi State University, State College, Miss.

Jan. 11-14—Kansas Fertilizer Dealer Meetings: Jan. 11, Hiawatha; Jan. 12, Lawrence; Jan. 13, Abilene, and Jan. 14, Belleville.

Jan. 12-13—Thirteenth Annual Meeting of the Ohio Pesticide Institute, Lincoln Lodge, Columbus, Ohio.

Jan. 12-13—Nebraska Fertilizer Institute annual convention, Pershing Auditorium, Lincoln, Neb.

Jan. 13—New Mexico Agricultural

Chemical Conference, third annual meeting, Milton Hall, New Mexico State University, University Park, N.M., Dr. J. Gordon Watts, chairman.

Jan. 13-14—Pesticide School, North Carolina State College, Raleigh, N.C.

Jan. 13-15—Ninth Annual Convention, Agricultural Ammonia Institute, Statler Hilton Hotel, Dallas, Texas.

Jan. 14-16—10th Annual Convention of the Agricultural Aircraft Assn., El Mirador Hotel, Palm Springs, Cal.

Jan. 20-21—Third Annual Arizona Fertilizer Conference, University of Arizona campus, Tucson, Ariz.

Jan. 20-21—North West Agricultural Chemicals Industry Conference, Benson Hotel, Portland, Ore., C. O. Barnard, executive secretary.

Jan. 20-22—Thirteenth Annual Southern Weed Conference, Buena Vista Hotel, Biloxi, Miss.

Jan. 21—Northeast Region, National Plant Food Institute fertilizer sales promotion workshop, Hotel Hershey, Hershey, Pa.

Jan. 25—Wisconsin Lime and Fertilizer Day, University of Wisconsin campus, Madison, Wis.

Jan. 25-26—Second Annual Agricultural Pesticide Conference, Purdue University, Lafayette, Ind.

Jan. 25-27—Cotton States Branch, Entomological Society of America, DeSoto Hotel, Savannah, Ga.

Jan. 26-27—South Dakota Fertilizer Dealers Short Course, South Dakota State College, Brookings, S.D.

Jan. 27-28—Annual Illinois Custom Spray Operators' Training School, University of Illinois, Urbana, Ill.

Jan. 27-29—Symposium on Chemistry of Phosphate-Soil Reactions, Muscle Shoals, Ala.

Jan. 28-29—Annual meeting of the Colorado Agricultural Chemicals Assn., Cosmopolitan Hotel, Denver, Colo.

Feb. 2-4—Pest Control Operators' School, North Carolina State College, Raleigh, N.C.

Feb. 8-9—Southwestern Branch, Entomological Society of America, Hilton Hotel, El Paso, Texas.

Feb. 9-11—Seventh Annual Agricultural Chemicals Conference, Texas Technological College, Lubbock, Texas.

Feb. 11-12—Midwest Agronomists-Fertilizer Industry meeting, Edgewater Beach Hotel, Chicago, Ill.

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Feb. 17-18—Pest Control Conference, Alabama Polytechnic Institute campus, Auburn, Ala. Sponsored by A.P.I. and the Alabama Association for Control of Economic Pests.

Feb. 22-25—Weed Society of America meeting, in conjunction with Western Weed Conference, Cosmopolitan Hotel, Denver, Colo.

March 23-25—North Central Branch, Entomological Society of America, Schroeder Hotel, Milwaukee, Wis.

June 13-18—National Plant Food Institute annual meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

June 27-29—Pacific Branch, Entomological Society of America, Davenport Hotel, Spokane, Wash.

July 13-15—Eleventh Annual Fertilizer Conference of the Pacific Northwest, Hotel Utah, Salt Lake City; B. R. Bertramson, State College of Washington, Pullman, Wash., chairman.

July 27-29—Great Plains Agricultural Council, 1960 meeting, Laramie, Wyo.

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